2003-2004
WISCONSIN CANADA GOOSE HARVEST REPORT

Volume 14, Issue 3

Kent Van Horn
Bureau of Wildlife Management

Allison Oberc
Bureau of Wildlife Management

Brian Dhuey
Bureau of Integrated Science Services

2003 Regular Season Canada Goose Harvest

Zone	Zone Allocation	Est. Harvest	% of Allocation
Collins	1,000	1,026	102.6%
Horicon	26,100	26,113	100.0%
Exterior	58,400	46,699	80.0%
TOTAL	85,500	73,838	86.4%

2004 Regular Season Canada Goose Harvest

Zone	Zone Allocation	Est. Harvest	% of Allocation
Collins	700	470	67.1%
Horicon	19,000	12,769	67.2%
Exterior	29,500	26,902	91.2%
TOTAL	49,200	40,141	81.6%

WISCONSIN 2003-2004 CANADA GOOSE HARVEST REPORT

INTRODUCTION:

The management of Canada geese populations and hunting recreation has been a social and biological challenge for the state of Wisconsin since the 1950's (Miller 1998). Continental Canada goose management is based on several different breeding populations. The fall population of Canada geese in Wisconsin consists primarily of 2 populations. One population, is the Mississippi Valley Population (MVP) that breeds along the southern Hudson Bay Coast in Ontario and migrates south primarily through Wisconsin and Michigan, and then Illinois, Indiana, and western Ohio. Most birds move no further south than Kentucky and Tennessee although some go as far south as Mississippi (MVP plan 1998, Leafloor et al. 2003). A second major population of geese is the resident or giant race that breeds in WI. Based on banding data a small percentage of Wisconsin's goose harvest (~3%) also comes from the Eastern Prairie and Tall Grass Prairie Populations. The Mississippi Flyway Council (MFC) was established in 1952 to work cooperatively among the states, provinces and federal governments in the management of migratory birds and in 1956 the MFC established a Canada Goose Committee to manage the harvest and distribution of several Canada goose populations in the Flyway.

In the 1950's the MVP was the primary population of Canada geese in Wisconsin while the giant race was considered nearly extinct in the Flyway. During this period, Horicon National Wildlife Refuge in WI began managing specifically to support migrating MVP during the fall. Landscape changes, Horicon refuge management and an expanded refuge system in Illinois all contributed to an increase in fall/winter Canada goose populations and harvest levels in both states. In 1960 Wisconsin and Illinois agreed to establish a harvest quota system to cooperatively manage goose harvest and despite a number of changes a quota system still remains. During the early 1960's MVP geese steadily increased in numbers at Horicon with fall numbers exceeding 100,000 geese and harvest near 1,000 geese per day for only a 9-11 day season. This growing fall goose population began to cause significant agricultural crop depredation in WI and complaints by hunters in states to the south that WI was short stopping geese (Miller 1998). In 1965 agricultural damage payments began as a result of goose depredation in east central WI. Over a period of several years in the 1960's social, political and biological forces surrounded goose management and resulted in actions such as hazing and a harvest of 30,000 geese in 3 days of shooting in 1966. In 1965 the MFC agreed to a winter Flyway population objective of 200,000 and in 1969 this was increased to 300,000. Several states in the Flyway wished to see an increase in the MVP goose population and a greater distribution of these birds to the south of WI while WI managers continued to express concern over increased goose concentrations in east central WI.

In the 1970's up to 80% (250,000-300,000 birds) of the MVP winter population stopped at the Horicon and surrounding areas (Miller 1998). Agricultural and biological concerns over this concentration of birds lead to the 1976 management strategy to reduce the peak fall population and encourage birds to move on south. Altering land management in the Horicon NWR, and increased harvest and disturbance helped to move geese out of the refuge but not necessarily to locations outside of WI. However, many hunters and goose watchers in Wisconsin opposed

these efforts to redistribute goose concentrations. A number of biological and political concerns complicated management efforts. In 1979 the MFC prepared the first Flyway wide management plan for the MVP in an attempt to create a more scientifically based management strategy. Revisions of this plan continue to guide the management of the MVP population.

Meanwhile, a few small remnants of the giant race of Canada geese were discovered in southern WI and elsewhere in the Flyway during the 1950's and 1960's. Restoration efforts to increase this population began in the 1960's and involved releasing of birds from captive reared populations, translocation of birds within and among states and provinces, and closure of Canada goose hunting in some areas (MF Giant Canada goose management plan 1996). Now giant Canada geese are the most abundant subspecies in the Flyway (Leafloor et al. 2003). The increase in the giant population began in urban and rural areas of southeast WI and this area remains an area of increasing resident goose densities. Giant Canada geese have adapted well to the urban, suburban and agricultural landscapes in Wisconsin resulting in an increasing population and expanding distribution across the state. With this increasing population and distribution come both problems with agricultural damage and urban nuisance geese as well as increased hunting and viewing opportunities. Harvest derivations indicate that giants are now 49% of the WI regular season Canada goose harvest and nearly all of the early September season harvest. The breeding population of giants has steadily increased for the last several years.

The current MVP management plan provides the basis for evaluation and management of the MVP population and harvest. The annual harvest quota is determined using the breeding population estimate (breeding adults) produced by the Ontario Ministry of Natural Resources as a trigger to determine different harvest levels. Based on the total MVP harvest level, the harvest quota is distributed among the major and minor harvest states as follows; WI –35%, IL –33%, MI 20%, KY 12% and the minor harvest states a collective harvest of 80,500. Annual harvest derivations for each state indicate the percentage of the annual Canada goose harvest for each state that comes from MVP, resident Giants or other populations. The total harvest quota for the state of Wisconsin is determined by applying the most recent derivations to the MVP harvest allocation.

As part of the cooperative agreement with the MFC, WI is required to monitor and control harvest of Canada geese in order to stay within our allotted quota. This report is a summary of the 2003 and 2004 management of harvest.

BREEDING POPULATIONS

The years of 2003 and 2004 represent different extremes of Canada goose production for the MVP and management of harvest in Wisconsin. In 2003, the breeding surveys for MVP geese in northern Ontario indicated a good production year (Walton and Hughes June 2003). The breeding population was estimated at 360,052. This allowed a liberal harvest quota to be allocated to the quota states in the Mississippi Flyway including Wisconsin. Using the harvest derivations calculated in 2003 for MVP and giant proportions in WI, a statewide quota of 85,500 geese was established. This was the highest quota in 10 years. This quota was distributed among the 3 zones as follows; 58,400 Exterior, 26,100 Horicon and 1,000 Collins. In addition, Wisconsin's spring breeding waterfowl survey documented a significant increase in the resident

Giant breeding population. While the 2003 WI breeding population estimate is believed to be high because of survey timing and correction factors it was consistent with an increasing trend in breeding geese in WI. The liberal Canada goose hunting season structure reflected this good production year while maintaining control of the harvest within the allowed quota.

In 2004, a late winter resulted in a very different picture of MVP goose production. The breeding population estimate was only 276,344 birds and limited nest monitoring showed very low nest densities (Walton and Hughes, June 2004). This was the second lowest breeding pair estimate in 16 years of the survey. In compliance with the MVP management plan Canada goose harvest quotas were reduced among the harvest quota states in the Flyway. Wisconsin's harvest quota was established based on the updated harvest derivations generated in 2004 for MVP and Giant harvest. Fortunately, annual harvest derivations continued to show that resident giant Canada geese are an increasing percentage of Wisconsin's regular season Canada goose harvest. This continued shift in derivations helped to buffer some of the impact of reduced MVP production on the WI Canada goose harvest quota. In 2004 the average Canada goose harvest derivation of the previous 3 years showed 61% of the harvest from MVP and 36% from giants. A sustained resident breeding population also supported this increased dependence on resident giants as part of Wisconsin's goose harvest. As a result of these factors, Wisconsin's statewide harvest quota was 49,200 and it was distributed as follows; 29,200 Exterior, 19,000 Horicon, 700 Collins.

METHODS

The Wisconsin Department of Natural Resources collects Canada goose harvest data via 2 different methods in the 3 Canada goose management zones. In the statewide Early September season and in the Exterior zone during the regular season all Canada goose hunters are required to report their harvest using the 1-800-99-GOOSE telephone call-in system within 48 hours. With this system hunters report the following information: DNR customer number, month of harvest, day of harvest number of geese harvested, and county of harvest. This information is electronically recorded and summarized in a harvest database that is reviewed at least weekly during the season to track harvest levels. Department law enforcement personnel around the state conduct field checks of Canada goose hunters to assure compliance with the recording system. Results of these filed checks provide a compliance rate that is used to adjust the harvest records to estimate total Canada goose harvest.

Horicon/Collins Mail Survey

Canada goose hunters in the Horicon and Collins zones were mailed a hunter questionnaire to obtain harvest information. The questionnaire was sent to 100% of permit holders for the Collins Zone and about 41% of the Horicon Zone permit holders. The questionnaire was mailed to hunters at the end of each time period. The hunters were selected randomly in proportion to the number of hunters in each time period. Response rates for questionnaires (Tables 1.1 & 1.2) for the Collins Zone declined in both 2003 and 2004 compared to 2002 (60.6% and 55.4% respectively). The response rates for the Horicon Zone also declined compared to the 2002 response rate (68%). The reasons for the decline in the survey

response rate are unclear. However, we note that the percent of active hunters in both zones declined this year, compared to 2002. Other mail surveys show that inactive participants respond at a lower rate than active participants.

RESULTS AND DISCUSSION

Early September Canada Goose Season Hunter Participation and Harvest

The Early September season is an important part of Wisconsin's Canada goose management program. This season offers hunters an additional recreational experience and helps to target harvest on our resident Giant Canada geese. The breeding population for our resident geese has had a fairly consistent increasing trend and in some areas and these increased goose numbers have resulted in nuisance problems.

The number of applicants for the Early September Canada Goose permit was similar in 2003 (76,728) and 2004 (76,294), however, the total harvest increased from 8,650 in 2003 to 14,007 in 2004 (Tables 20.1 & 20.2). We have no data to assess the percent of the total applicants that actively hunted during this period. Conservation Patron license customers are offered a Early September Canada Goose permit as part of the combined license package so some of these permit holders may have had little intent to hunt during this season even though they had a permit. The decreased harvest in 2003 was a concern to the Department since we wanted to increase harvest on this population. The Department made an increased effort in 2004 to encourage hunters to hunt during this early season, particularly in a year when we knew that the regular season quota was going to be much lower than the previous year. The increased harvest figures suggest that Department actions were successful in increasing participation. Based on the counties with the highest harvest during the early season, it appears that we are targeting different geese and different hunter interest than the regular season. Particularly, for counties like Polk and Barron that show up in the top 10 early season harvest counties in both 2003 and 2004 but rank much lower during the regular season.

Top 10 counties – early season harvest - 2003

County	Rank	Estimated kill	Percent of statewide total
Brown	1	563	6.5
Manitowoc	2	516	6.0
Polk	3	451	5.2
Jefferson	4	365	4.2
Door	5	316	3.7
Waukesha	6	303	3.5
Dane	7	292	3.4
Barron	8	278	3.2
Washington	9	268	3.1
Sheboygan	10	266	3.1

Top 10 counties – early season harvest - 2004

County	Rank	Estimated kill	Percent of statewide total
Brown	1	1,045	7.5
Polk	2	954	6.8
Manitowoc	3	833	5.9
Sheboygan	4	604	4.3
Barron	5	597	4.3
Door	6	493	3.5
Winnebago	7	381	2.7
Trempealeau	8	358	2.6
Burnett	9	381	2.7
Kewaunee	10	350	2.5

REGULAR SEASON HUNTER PARTICIPATION AND CHARACTERISTICS

Permit Issuance
Exterior Zone
2004 = 89,564
2003 = 92,011
2002 = 89,186
2001 = 82,091
2000 = 84,686
1999 = 77,921
1998 = 52,832
1997 = 54,404
1996 = 51,069
1995 = 53,104
1994 = 44,108
1993 = 30,854
1992 = 27,332
1991 = 40,094
1990 = 40,197
1989 = 33,331
1988 = 24,052

In 2003 112,716 individuals received a Wisconsin Canada goose hunting permit. This was a 1.6% increase over 2002. However, in 2004 the total permit holders dropped to 109,958, which is a decrease of 2758 (2.4%). Two factors likely contributed to this decrease; the lower harvest quota and the increase in the Conservation Patron license fee. As part of the combined license package a Conservation Patron holder is offered an Exterior Zone Canada goose permit as part of the total license fee. The number of Exterior Zone permit holders declined by 2447 which represents most of the overall decrease in permits.

Exterior Zone

Exterior Zone permits totaled 92,011 in 2003 and 89,564 in 2004. This represents the majority of the total goose harvest permits in both years (82 % in 2003 and 81% in 2004), however, we have no estimate of how many were actively hunting geese. Estimates of the number of Wisconsin goose hunters derived from USFWS HIP estimates suggest 65,700 (+/- 4600) of these permit holders from all

zones actually hunted geese in 2003 (Fronczak 2004). If we estimate about 16,000 active hunters in the Horicon/Collins zones then we can suggest that about 50,000 of the Exterior permit holders were actively hunting geese in 2003. This does not include those who had planned to hunt geese earlier in the year but decided not to hunt that fall.

There was little difference between years in the counties with the highest total Exterior Zone goose permits. In 2003, the 5 counties with the highest total goose permit applicants were Waukesha, Dane, Milwaukee, Outagamie and Winnebago (Table 3.1 & 3.2.). The top 3 counties also have the 3 highest totals for overall human population in the state, however, the 4th and 5th seem to have a higher proportion of goose hunters in relation to population size. In 2004, the same 5 counties remained the top 5 for number of applicants but Outagamie surpassed Milwaukee for the third highest.

Horicon Zone

The Horicon Zone is a large area that includes all of Green Lake and parts of Dodge, Columbia, Fond du lace, Marquette, Washington and Winnebago counties. There was a slight decrease in the number of Horicon Zone permits issued from 2003 (20,211) to 2004 (19,937), however the percentage of total hunters represented by the Horicon permits remained the same at 18% (Tables 2.1 & 2.2). There has been a decline in the percentage of Canada goose hunters selecting the Horicon zone over the last 17 years but this decline in interest may be leveling off. During the summer of 2004, the Department predicted as early as June that the Canada goose harvest quotas would be low so many Horicon hunters knew that they would be getting fewer than the 6 tags that were issued during 2003. Persons selecting the Horicon zone were required to apply by August 10. Given that only 3 tags were issued per Horicon permit holder, it does not appear that this level of harvest opportunity had a significant impact on the initial interest in hunting the Horicon Zone. However, the number of active Horicon hunters (from all time periods combined) declined from 15,517 in 2003 to 14,380 in 2004. This represents an actual decline in participation of Horicon permit holders from 77% in 2003 to 72% in 2004. This change in the percentage of Horicon permit holders that actively hunt is typical of the general pattern observed in recent years as quotas rise and fall. For example:

Year	Horicon Tags issued	Percent active hunters
2004	3	72
2003	6	77
2002	2	74
2001	1	68
2000	6	79
1999	5	81
1998	1	68
1997	2	76

Horicon zone hunters are primarily hunters that have previous experience in this zone. In 2003, 93.7% of the Horicon zone hunters had hunted the Horicon zone in previous years and in 2004 the figure was 93.1% (Table 4..). The Horicon time periods are intended to distribute hunter harvest pressure across the fall season. In both 2003 and 2004, hunter preference for time periods 2 and 3 continued from previous years with the fewest applicants for time period 4 (Tables 2.1 & 2.2).

More than ½ of the Horicon zone hunters are hunting on private land (Table 17.1 & 17.2). About 1/3 of the Horicon zone permit holders hunt from blinds in the Horicon Intensive Management Subzone and continue to provide a significant contribution to the local economy in blind fees alone (Table 19.1 & 19.2)

In addition, many Horicon Zone goose hunters were specifically goose hunters and did not hunt both ducks and geese. In 2003, 36.7% (7,417) of the Horicon Zone hunters did not hunt ducks that year and 39.1% did not hunt ducks in 2002. In 2004, 30.2% (6,021) of the Horicon Zone hunters did not hunt ducks that year.

Horicon Zone
2004 = 19,937
2003 = 20,211
2002 = 21,268
2001 = 23,697
2000 = 24,656
1999 = 25,635
1998 = 27,356
1997 = 34,439
1996 = 35,707
1995 = 38,045
1994 = 39,062
1993 = 32,248
1992 = 35,387
1991 = 50,373
1990 = 47,980
1989 = 40,180
1988 = 32,500

Collins Zone

The Collins Zone is a very small zone surrounding the Collins wildlife management area. The number of applicants for the Collins zone remains very small compared to the statewide number of Canada goose hunters (Tables 2.1 & 2.2). A total of 494 Collins zone permits were issued in 2003 and 457 in 2004. As with the Horicon Zone hunters, these hunters are mostly returning to this zone from previous years (87.2% in 2003 and 86.6% in 2004) (Tables 4.1 & 4.2). In 2003, 424 (86%) of the permit holders actively hunted geese and in 2004, 368 (81%) of the permit holders actually hunted in this zone. While the number of permits awarded in the Collins zone has shown a decreasing trend over the last 17 years, the percentage of those actively hunting in 2003 and 2004 was high compared to recent years (2002 - 54%, 2001- 45%, 2000 – 66%). Hunters preferred time period 2 in both years and about 40% of Collins Zone goose hunters did not hunt ducks in recent years (Tables 2.1, 2.2, 6.1 & 6.2).

Permit Issuance
Collins Zone
2004 = 457
2003 = 494
2002 = 475
2001 = 615
2000 = 583
1999 = 662
1998 = 699
1997 = 845
1996 = 839
1995 = 950
1994 = 887
1993 = 724
1992 = 781
1991 = 969
1990 = 1,197
1989 = 1,303
1988= 975

REGULAR SEASON HARVEST

Statewide

The statewide regular season Canada goose harvest in 2003 was 73,838 and in 2004 it was 40,141. Production of MVP geese in 2003 was very good while in 2004 production was poor. As a result, Wisconsin's harvest quota was much lower in 2004 and the state goose hunting regulations were structured to allow a reduced harvest level within the lower quota. Based on these statewide harvest figures, it appears that season structure was effective in managing harvest both years consistent with the different levels of annual production. The overall harvest level in 2003 was 86% of the quota (85,500) and in 2004 it was about 82% of the quota (49,200).

When combining the harvest from all zones by county the top 10 harvest counties in 2003 were:

Top 10 counties – Statewide (all zones) harvest - 2003

County	Rank	Estimated kill	Percent of statewide total
Dodge	1	14,531	19.7
Fond du lac	2	5,831	7.9
Manitowoc	3	4,577	6.2
Brown	4	3,662	5.0
Green Lake	5	3,613	4.9
Washington	6	2,415	3.3
Sheboygan	7	2,195	3.0
Outagamie	8	2,069	2.8
Dane	9	1,948	2.6
Racine	10	1,847	2.5

In 2004 they were:

Top 10 counties – Statewide (all zones) harvest - 2004

County	Rank	Estimated kill	Percent of statewide total
Dodge	1	7,407	18.5
Fond du lac	2	2,947	7.3
Manitowoc	3	2,161	5.4
Brown	4	2,020	5.0
Green Lake	5	1,571	3.9
Dane	6	1,303	3.2
Washington	7	1,251	3.1
Sheboygan	8	1,216	3.0
Waukesha	9	1,107	2.8
Racine	10	1,096	2.7

This county level distribution illustrates continued concentration of geese and goose harvest in those areas associated with the Horicon (Dodge, Green Lake, Washington and Fond du lac) and Collins (Manitowoc) zones.

Exterior

The Exterior zone represents all areas of the state open to goose hunting outside of the Horicon and Collins zones. The total Exterior zone harvest was 48,699 in 2003 and 26,902 in 2004, which was 63% and 67% of the statewide harvest, respectively (Table 9.1 & 9.2). The total Exterior harvest in 2003 was 80% of the quota for that zone while in 2004 it was 91.2%.

In 2003 and 2004 the list of top 10 harvest counties is very similar (Table 10.1 & 10.2). This group of counties represents the southeastern one third of the state excluding those areas in the Horicon and Collins management zones. These counties also overlap with several of the counties with the highest human populations which suggests that we are successful in taking advantage of some of the harvest potential in areas where high goose numbers have greater potential to create nuisance problems.

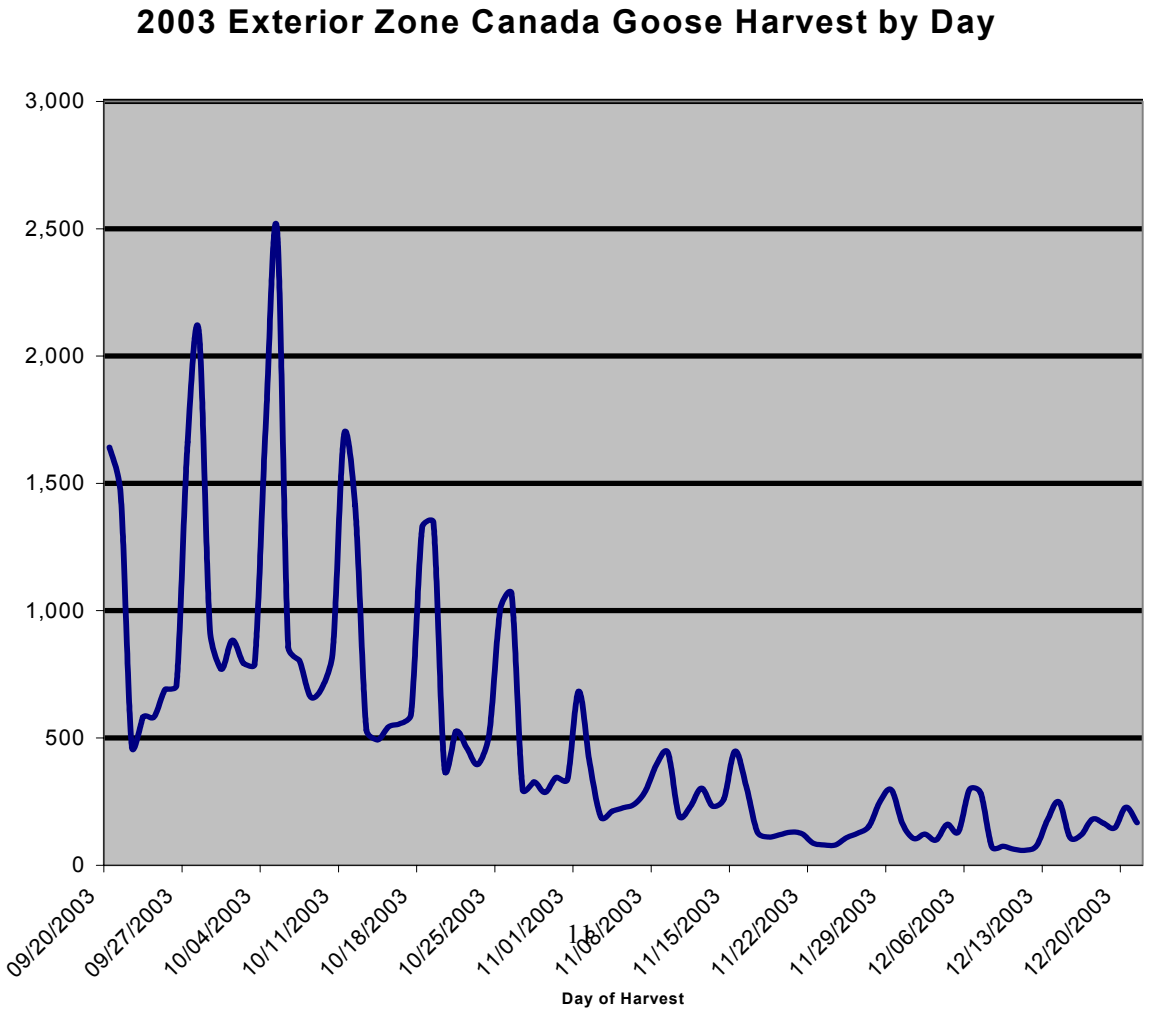
Top 10 counties – Exterior harvest - 2003

County	Rank	Estimated kill	Percent of Exterior total
Brown	1	3,662	7.8
Manitowoc	2	3,551	7.6
Sheboygan	3	2,195	4.7
Outagamie	4	2,069	4.4
Dane	5	1,948	4.2
Racine	6	1,847	4.0
Kenosha	7	1,704	3.6
Waukesha	8	1,664	3.6
Ozaukee	9	1,621	3.5
Door	10	1,442	3.1

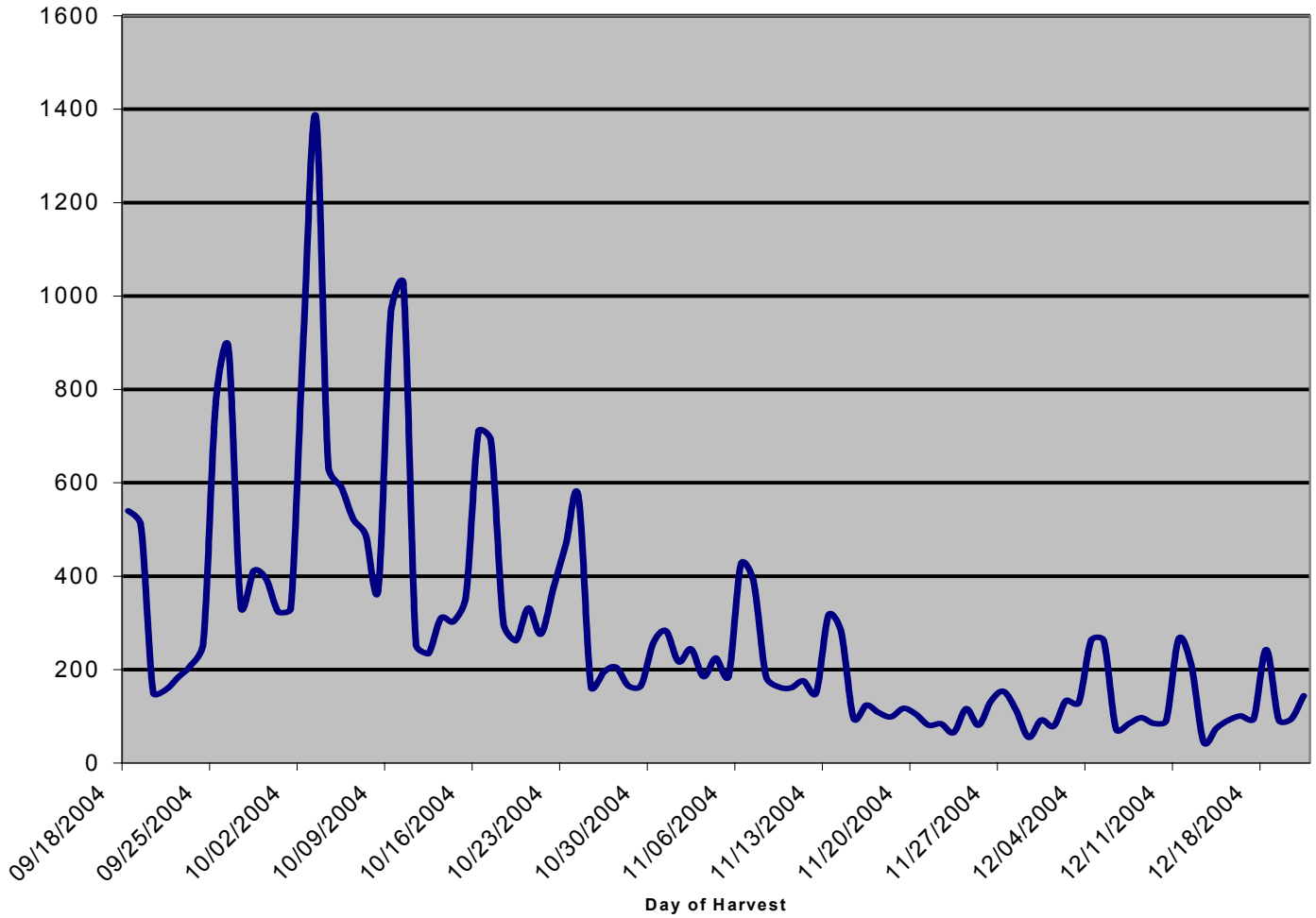
Top 10 counties – Exterior harvest - 2004

County	Rank	Estimated kill	Percent of Exterior total
Brown	1	2,020	7.5
Manitowoc	2	1,691	6.3
Dane	3	1,303	4.8
Sheboygan	4	1,219	4.5
Waukesha	5	1,107	4.1
Racine	6	1,096	4.1
Outagamie	7	1,059	3.9
Walworth	8	948	3.5
Kenosha	9	851	3.2
Washington	10	830	3.1

Harvest of Canada goose continues to be highest on weekends and most of the Exterior zone harvest occurs in late September and October (Table 12.1 & 12.2). Daily and weekly harvest levels drop off considerably during November and December. During a high quota year of 2003, 11,259 hunters harvested at least one goose out of 92,011 people that held an Exterior goose harvest permit (Table 16.1 & 16.2). This represents 12% of potential hunters actually harvesting a goose, however, we have no measure of how many of these permit holders actively hunted geese in 2003. In 2004, 9,193 (10%) of the Exterior zone hunters harvested at least 1 goose out of 89,564 permit holders. Thirty two percent of the successful hunters harvested only 1 goose in 2003 and 27% harvested 2 geese while in 2004 55% harvest 1 goose and 21% harvested 2 geese. The number of geese harvested per hunter in the Exterior zone declined from .51 in 2003 to .30 in 2004. The goose season structure in 2004 was intended to reduce harvest in the Exterior zone because of a low production year and it was successful in managing harvest by reducing the number of successful hunters and the number of geese bagged per hunter. On the other hand, the more liberal season structure of 2003 allowed increased success and bag per hunter in a very good production year.



2004 Exterior Zone Canada Goose Harvest by Day



Horicon Zone

The total harvest for the Horicon Zone was 26,113 in 2003 and 12,769 in 2004 which was 35% and 32% of the statewide harvest, respectively (Tables 9.1 & 9.2). The total Horicon Zone harvest in 2003 was 100% of the quota for that zone while in 2004 it was 67%. The areas (portions of Dodge and Fond du lac Counties) directly adjacent to the Horicon National Wildlife Refuge and Wildlife Management Areas continue to represent 75% or more of the Horicon Zone harvest.

The overall number of Horicon zone permit holders declined only slightly between 2003 and 2004 but their participation and success showed greater relative declines (Tables 2.1, 2.2, 14.1, & 14.2). Horicon zone hunters were 10-17% less successful in harvesting their first goose in 2004 than 2003 depending on time period. There are likely 2 factors contributing to this decrease in success. The first is decreased effort in 2004 resulting in 3 tags being issued rather than 6 tags in 2003. This is supported by the decrease in the mean number of trips taken by active hunters in this zone in 2004 compared to 2003 (Tables 7.1 & 7.2). In addition, the fall goose population in

the Horicon zone is likely a higher proportion of MVP versus resident birds compared to other parts of the state. Given that 2004 was a low production year for the MVP, a high proportion of the geese in that zone would be adults and more experienced at avoiding the gun than young of the year.

The highest harvest occurred in time period 2, followed by time period 3 in both years which matches the rank in number of permits issued for those periods. In both years time period 2 represented 43% of the total Horicon zone harvest even though the period was later and longer in 2003; September 27 - Nov 7 in 2003 and September 25-October 29 in 2004.

Collins zone

The Collins zone is a relatively small harvest management zone that represents an area with high harvest potential. Manitowoc County is the 3rd highest in Canada goose harvest when combining the harvest from all zones and the Collins area is a key goose concentration area in that county. The total harvest for the Collins zone was 1,026 in 2003 and 470 in 2004 (Tables 9.1 & 9.2). The total Collins zone harvest in 2003 was 103% of the quota for that zone while in 2004 it was 67%. While small, the Collins zone represents an area of consistently high hunter success compared to other areas of the state (Tables 14.1, 14.2, 15.1, & 15.2).

MANAGEMENT IMPLICATIONS

At 61% of the harvest, Wisconsin is still largely dependent upon the MVP geese which breed in northern Ontario for its annual Canada goose harvest although proportion of resident geese in the harvest continues to grow each year. This is proportion of harvest makes Wisconsin unique among states in the Mississippi Flyway where resident Giant Canada geese harvest makes up over 50% of the annual harvest for most other states. The only other state that in the flyway that does not harvest a large proportion of Giants is Louisiana but they only harvest a few thousand Canada geese of all populations in a good year. In order to properly manage the MVP and meet USFWS requirements, Wisconsin has to be able to adjust our annual Canada goose harvest in relation to the annual changes in MVP production. Based on the comparison of a high (2003) and low (2004) quota year, we are effectively managing our harvest levels in relation to these quotas. We were able to reduce the statewide harvest during a low harvest quota in 2004 and take advantage of a higher quota in 2003 but in both years we estimated statewide harvest at over 80% of the quota. Clearly, the potential for a large Canada goose harvest continues to exist in the area around the Horicon marsh indicating a continued need for special harvest management in this zone.

The annual changes in Canada goose breeding populations of MVP and Wisconsin Giants illustrate the need for continued breeding surveys, banding and harvest monitoring in order to effectively manage Canada geese in Wisconsin. Both breeding, fall distribution and harvest of Canada geese in Wisconsin is a constantly changing picture. Each year the information collected on Canada gees in Wisconsin is used to evaluate and adjust our harvest quotas, season structure and banding efforts. Based on these data, we made significant changes in our banding distribution and effort in 2004 in order to better sample the harvest population of geese in

Wisconsin. These data will provide us the necessary information to document the changes in distribution and population of our resident Giant breeders in relation to the MVP. This information will allow us to make the necessary adjustments to management and harvest of Canada geese in Wisconsin.

Agricultural crop damage from Canada geese continues to be a concern for farmers in Wisconsin in the Horicon area and other locations were Canada geese concentrate. The continued evaluation of harvest and damage has allowed the state to adjust our quota levels and seasons structure to aid in controlling crop damage. Based on declines in agricultural damage complaints and damage claims in recent years it appears that our management of harvest is helping these issues. Wisconsin continues to offer agricultural harvest tags in order to assist specific farmers with documented goose damage. In 2003, 103 geese were harvested under these special permits and in 2004, 93 geese were taken. Consideration of agricultural damage issues in the management of Wisconsin's Canada geese populations is important in our overall management approach.

Similarly, Canada goose problems in urban areas are part of the overall management of Canada geese in Wisconsin. Our resident breeders have shown a generally increasing population trend since we began monitoring this population in 1986. Much of this increase has been in more suburban and urban counties, however, resident breeders continue to increase in distribution across the state. As we monitor breeding populations and harvest we can evaluate our effectiveness at using recreational harvest to assist in managing these more urban problems from concentrations of Canada geese.

CITATIONS:

Fronczak, D. 2004. Waterfowl Harvest and Population Survey Data. US Fish and Wildlife Service Report, Columbia, MO. 92 pp.

Leafloor, J.O., K. F. Abraham, F. D. Caswell, K. E. Gamble, R. N. Helm, D. D. Humburg, J. S. Lawerence, D. R. Luukkonen, R. D. Pritchert, E. L. Warr, G. G. Zenner. 2003. Canada goose management in the Mississippi Flyway. Pages 22-36 in T. J. Moser, R. D. Lien, K. C. VerCauteren, K. F. Abraham, D. E. Andersen, J. G. Bruggink, J. M. Coluccy, D. A. Graber, J. O. Leafloor, D. R. Luukkonen, R. E. Trost, editors. Proceedings of the 2003 International Canada Goose Symposium, Madison, WI. USA.

Miller, S.W. 1998. The biopolitics of Mississippi Valley Population Canada geese management: the Wisconsin perspective. Pages 467-474 in D.H. Rusch, M. D. Samuel, D. D. Humburg, and B. D. Sullivan, editors. Biology and management of Canada geese. Proceedings of the international Canada Goose Symposium, Milwaukee, Wisconsin, USA.

Walton, L. and J. Hughes June 2003. Preliminary Spring Survey Results for MVP Canada geese 2003. Ontario Ministry of Natural Resources. 4 pp.

Table 1.1 *Number of surveys mailed, returned, and response rate for the 2003 Canada goose season.*

Zone and Period	# Mailed	# Returned	Percent Response
Horicon 1	1,536	839	54.6%
Horicon 2	3,480	2,083	59.9%
Horicon 3	3,075	1,856	60.2%
Horicon 4	1,908	1,246	65.3%
Collins 1	122	63	51.6%
Collins 2	305	219	71.8%
Collins 3	67	51	76.1%
Total	**10,493**	**6,357**	**60.6%**

Table 2.1 2003 *Permits issued, active hunters, percent active, and number of successful hunters by zone and time period. Active and successful hunters derived from questionnaire data. Percent successful applies to active permit holders, except for Exterior Zone where it applies to all permit holders.*

Zone and Period	Permits Issued (hunters)	Active Hunters	% Active	# Successful	% Successful
Horicon 1	3,431	2,560	74.6%	1,541	60.2%
Horicon 2	7,940	6,249	78.7%	3,999	64.0%
Horicon 3	6,932	5,435	78.4%	3,033	55.8%
Horicon 4	1,908	1,273	66.7%	732	57.5%
Collins 1	122	93	76.2%	46	50.0%
Collins 2	305	273	89.5%	217	79.6%
Collins 3	67	58	86.3%	39	68.2%
Exterior	92,011			11,259	12.2%
Total	**112,716**			**20,866**	**18.5%**

Table 3.1 2003 *Number of goose permit applicants by zone and county of residence. (Continued on next page).*

	Horicon		Collins		Exterior	
County	Frequency	Percent	Frequency	Percent	Frequency	Percent
Adams	25	0.1%			255	0.3%
Ashland	2	0.0%			306	0.3%
Barron	9	0.0%			1,466	1.6%
Bayfield	3	0.0%			299	0.3%
Brown	100	0.5%	32	6.5%	3,099	3.4%
Buffalo	40	0.2%			483	0.5%
Burnett	2	0.0%			643	0.7%
Calumet	26	0.1%	41	8.3%	702	0.8%
Chippewa	31	0.2%	1	0.2%	1,111	1.2%
Clark	13	0.1%	1	0.2%	478	0.5%
Columbia	808	4.0%			1,521	1.7%
Crawford	106	0.5%			420	0.5%
Dane	1,165	5.7%	4	0.8%	5,262	5.7%
Dodge	1,733	8.5%			531	0.6%
Door	3	0.0%			828	0.9%
Douglas	6	0.0%			666	0.7%
Dunn	42	0.2%			725	0.8%
Eau Claire	140	0.7%	1	0.2%	1,337	1.5%
Florence	2	0.0%			75	0.1%
Fond Du Lac	1,889	9.2%	3	0.6%	1,022	1.1%
Forest	13	0.1%			215	0.2%
Grant	268	1.3%	1	0.2%	573	0.6%
Green	105	0.5%	1	0.2%	667	0.7%
Green Lake	723	3.5%			261	0.3%
Iowa	79	0.4%	1	0.2%	367	0.4%
Iron	4	0.0%			127	0.1%
Jackson	20	0.1%			347	0.4%
Jefferson	352	1.7%			2,280	2.5%
Juneau	49	0.2%			782	0.8%
Kenosha	178	0.9%			1,306	1.4%
Kewaunee	4	0.0%	3	0.6%	690	0.7%
La Crosse	402	2.0%	5	1.0%	2,225	2.4%
Lafayette	64	0.3%			242	0.3%
Langlade	25	0.1%			374	0.4%
Lincoln	115	0.6%			708	0.8%
Manitowoc	46	0.2%	77	15.6%	2,049	2.2%
Marathon	261	1.3%	5	1.0%	1,898	2.1%
Marinette	22	0.1%			1,086	1.2%
Marquette	169	0.8%			771	0.8%
Menominee					6	0.0%
Milwaukee	1,884	9.2%	6	1.2%	3,221	3.5%
Monroe	49	0.2%			768	0.8%
Oconto	16	0.1%	1	0.2%	970	1.1%
Oneida	121	0.6%	1	0.2%	1,033	1.1%
Outagamie	461	2.3%	111	22.4%	3,743	4.1%

County	Horicon		Collins		Exterior	
	Frequency	Percent	Frequency	Percent	Frequency	Percent
Ozaukee	286	1.4%	7	1.4%	1,441	1.6%
Pepin	21	0.1%			192	0.2%
Pierce	20	0.1%	1	0.2%	909	1.0%
Polk	6	0.0%			1,526	1.7%
Portage	209	1.0%	3	0.6%	1,549	1.7%
Price	30	0.1%			374	0.4%
Racine	248	1.2%	6	1.2%	2,859	3.1%
Richland	36	0.2%			185	0.2%
Rock	454	2.2%	1	0.2%	2,607	2.8%
Rusk	6	0.0%			306	0.3%
St. Croix	15	0.1%			1,840	2.0%
Sauk	250	1.2%	1	0.2%	1,288	1.4%
Sawyer	11	0.1%			444	0.5%
Shawano	66	0.3%	2	0.4%	917	1.0%
Sheboygan	247	1.2%	61	12.3%	2,519	2.7%
Taylor	7	0.0%			384	0.4%
Trempealeau	58	0.3%			741	0.8%
Vernon	143	0.7%	1	0.2%	483	0.5%
Vilas	64	0.3%	6	1.2%	478	0.5%
Walworth	123	0.6%			1,770	1.9%
Washburn	5	0.0%			723	0.8%
Washington	1,042	5.1%	3	0.6%	2,073	2.3%
Waukesha	1,878	9.2%	9	1.8%	5,436	5.9%
Waupaca	140	0.7%	6	1.2%	1,534	1.7%
Waushara	68	0.3%	2	0.4%	680	0.7%
Winnebago	1,027	5.0%	73	14.7%	3,197	3.5%
Wood	210	1.0%			2,195	2.4%
Unknown	834	4.1%	1	0.2%	2,463	2.7%
Non. Resident	1,359	6.6%	17	3.4%	2,960	3.2%

Table 4.1 2003 *Goose hunting in past zones.*

Current Zone	Past Collins	Past Horicon	Past Exterior
Collins	87.2%	3.4%	9.4%
Horicon	0.2%	93.7%	6.2%

Table 5.1 *Percent hunting geese in 2003 that also hunted in 2002.*

Zone	% That Hunted in 2002
Collins	81.5%
Horicon	85.1%

Table 6.1 *Past and present duck hunting by goose permit.*

Zone	Duck Hunted in 2002	Duck Hunted in 2003
Collins	58.3%	59.5%
Horicon	60.9%	63.3%

Table 7.1 2003 *Mean number of hunting trips by zone and time period. Applies to active permit holders only.*

Zone/Period	Mean # of Trips	Maximum # of Trips
Collins 1	5.8	20
Collins 2	4.9	12
Collins 3	6.6	20
Horicon 1	4.1	22
Horicon 2	4.3	30
Horicon 3	4.1	40
Horicon 4	3.9	30

Table 8.1 2003 *Harvest by zone and time period. The estimated harvest was derived from questionnaire data in the Collins and Horicon zones. Reported harvest in the Exterior Zone is from mandatory reporting. The reported harvest for the Exterior zone was adjusted by an overall compliance rate of 66.9% to obtain the estimated harvest.*

Zone/Period	Estimated Harvest	Reported Harvest
Collins 1	163	
Collins 2	742	
Collins 3	121	
Horicon 1	4,710	
Horicon 2	11,123	
Horicon 3	7,989	
Horicon 4	2,291	
Exterior	46,699	39,575
Total	**73,838**	

Table 9.1 2003 *Flyway allocation and estimated harvest by zone.*

Zone	Allocation	Harvest	% of Allocation
Collins	1,000	1,026	102.6%
Horicon	26,100	26,113	100.0%
Exterior	58,400	46,699	80.0%
Total	85,500	73,838	86.4%

Table 10.1 2003 *Exterior zone goose harvest by county (continued on next page).*

County	Reported Kill	Expanded Kill	Percent
Adams	368	434	0.9%
Ashland	87	103	0.2%
Barron	623	735	1.6%
Bayfield	88	104	0.2%
Brown	3,103	3,662	7.8%
Buffalo	283	334	0.7%
Burnett	437	516	1.1%
Calumet	485	572	1.2%
Chippewa	542	640	1.4%
Clark	376	444	1.0%
Columbia	349	412	0.9%
Crawford	127	150	0.3%
Dane	1,651	1,948	4.2%
Dodge	292	345	0.7%
Door	1,222	1,442	3.1%
Douglas	194	229	0.5%
Dunn	108	127	0.3%
Eau Claire	58	68	0.1%
Florence	66	78	0.2%
Fond du Lac	428	505	1.1%
Forest	61	72	0.2%
Grant	37	44	0.1%
Green	122	144	0.3%
Iowa	76	90	0.2%
Iron	113	133	0.3%
Jackson	52	61	0.1%
Jefferson	862	1,017	2.2%
Juneau	255	301	0.6%
Kenosha	1,444	1,704	3.6%
Kewaunee	1,221	1,441	3.1%
La Crosse	403	476	1.0%
Lafayette	22	26	0.1%
Langlade	160	189	0.4%
Lincoln	124	146	0.3%
Manitowoc	3,009	3,551	7.6%
Marathon	489	577	1.2%
Marinette	883	1,042	2.2%
Marquette	676	798	1.7%
Milwaukee	17	20	0.0%
Monroe	233	275	0.6%
Oconto	940	1,109	2.4%
Oneida	107	126	0.3%
Outagamie	1,753	2,069	4.4%
Ozaukee	1,374	1,621	3.5%
Pepin	9	11	0.0%
Pierce	97	114	0.2%

County	Reported Kill	Expanded Kill	Percent
Polk	788	930	2.0%
Portage	269	317	0.7%
Price	96	113	0.2%
Racine	1,565	1,847	4.0%
Richland	26	31	0.1%
Rock	736	868	1.9%
Rusk	166	196	0.4%
Saint Croix	745	879	1.9%
Sauk	199	235	0.5%
Sawyer	167	197	0.4%
Shawano	461	544	1.2%
Sheboygan	1,860	2,195	4.7%
Taylor	213	251	0.5%
Trempealeau	106	125	0.3%
Vernon	102	120	0.3%
Vilas	95	112	0.2%
Walworth	1,172	1,383	3.0%
Washburn	334	394	0.8%
Washington	1,218	1,437	3.1%
Waukesha	1,410	1,664	3.6%
Waupaca	724	854	1.8%
Waushara	346	408	0.9%
Winnebago	837	988	2.1%
Wood	513	605	1.3%
Unknown	1	1	0.0%
Total	**39,575**	**46,699**	

Table 11.1 2003 *Horicon Zone goose harvest by county. The estimated harvest was derived from questionnaire data.*

County	Total Estimated Harvest	% of Harvest
Columbia	740	2.8%
Dodge	14,186	54.3%
Fond du lac	5,326	20.4%
Green Lake	3,613	13.8%
Marquette	953	3.6%
Washington	978	3.7%
Winnebago	317	1.2%
Total	**26,113**	

Table 12.1 2003 *Exterior zone goose harvest by date. Bold numbers indicate weekends (continued on the next two pages).*

	Northern Zone				Southern Zone				All Zones	
Date	Reported Kill	Expanded Kill	Cumulative Kill	Cumulative Percent	Reported Kill	Expanded Kill	Cumulative Kill	Cumulative Percent	Cumulative Kill	Cumulative Percent
09/20/2003	**352**	**415**	**415**	**3.0%**	**1,040**	**1,227**	**1,227**	**3.7%**	**1,643**	**3.5%**
09/21/2003	**335**	**395**	**811**	**5.8%**	**901**	**1,063**	**2,290**	**7.0%**	**3,101**	**6.6%**
09/22/2003	150	177	988	7.1%	246	290	2,581	7.9%	3,568	7.6%
09/23/2003	166	196	1,184	8.5%	327	386	2,967	9.1%	4,150	8.9%
09/24/2003	131	155	1,338	9.6%	363	428	3,395	10.4%	4,733	10.1%
09/25/2003	186	219	1,558	11.2%	401	473	3,868	11.8%	5,426	11.6%
09/26/2003	188	222	1,779	12.8%	410	484	4,352	13.3%	6,131	13.1%
09/27/2003	**527**	**622**	**2,401**	**17.2%**	**881**	**1,040**	**5,391**	**16.5%**	**7,793**	**16.7%**
09/28/2003	**750**	**885**	**3,286**	**23.6%**	**1,028**	**1,213**	**6,604**	**20.2%**	**9,891**	**21.2%**
09/29/2003	371	438	3,724	26.7%	413	487	7,092	21.6%	10,816	23.2%
09/30/2003	271	320	4,044	29.0%	381	450	7,541	23.0%	11,585	24.8%
10/01/2003	317	374	4,418	31.7%	432	510	8,051	24.6%	12,469	26.7%
10/02/2003	283	334	4,752	34.1%	389	459	8,510	26.0%	13,262	28.4%
10/03/2003	252	297	5,049	36.2%	417	492	9,002	27.5%	14,051	30.1%
10/04/2003	**592**	**699**	**5,748**	**41.2%**	**881**	**1,040**	**10,042**	**30.7%**	**15,790**	**33.8%**
10/05/2003	**510**	**602**	**6,350**	**45.6%**	**1,608**	**1,897**	**11,939**	**36.4%**	**18,289**	**39.2%**
10/06/2003	209	247	6,596	47.3%	517	610	12,549	38.3%	19,146	41.0%
10/07/2003	223	263	6,859	49.2%	459	542	13,091	40.0%	19,950	42.7%
10/08/2003	201	237	7,097	50.9%	359	424	13,515	41.3%	20,611	44.1%
10/09/2003	190	224	7,321	52.5%	399	471	13,985	42.7%	21,306	45.6%
10/10/2003	231	273	7,593	54.5%	481	568	14,553	44.4%	22,146	47.4%
10/11/2003	**488**	**576**	**8,169**	**58.6%**	**945**	**1,115**	**15,668**	**47.8%**	**23,837**	**51.0%**
10/12/2003	**371**	**438**	**8,607**	**61.7%**	**826**	**975**	**16,643**	**50.8%**	**25,250**	**54.1%**
10/13/2003	157	185	8,792	63.1%	293	346	16,988	51.9%	25,781	55.2%
10/14/2003	137	162	8,954	64.2%	280	330	17,319	52.9%	26,273	56.3%
10/15/2003	138	163	9,117	65.4%	323	381	17,700	54.0%	26,817	57.4%
10/16/2003	156	184	9,301	66.7%	315	372	18,072	55.2%	27,372	58.6%
10/17/2003	193	228	9,529	68.4%	309	365	18,436	56.3%	27,965	59.9%
10/18/2003	**301**	**355**	**9,884**	**70.9%**	**825**	**974**	**19,410**	**59.3%**	**29,294**	**62.7%**
10/19/2003	**287**	**339**	**10,222**	**73.3%**	**854**	**1,008**	**20,418**	**62.3%**	**30,640**	**65.6%**
10/20/2003	101	119	10,342	74.2%	220	260	20,677	63.1%	31,019	66.4%
10/21/2003	145	171	10,513	75.4%	300	354	21,031	64.2%	31,544	67.5%
10/22/2003	117	138	10,651	76.4%	273	322	21,353	65.2%	32,004	68.5%
10/23/2003	124	146	10,797	77.5%	212	250	21,603	65.9%	32,400	69.4%
10/24/2003	140	165	10,962	78.6%	298	352	21,955	67.0%	32,917	70.5%
10/25/2003	**275**	**325**	**11,287**	**81.0%**	**579**	**683**	**22,638**	**69.1%**	**33,925**	**72.6%**
10/26/2003	**259**	**306**	**11,592**	**83.2%**	**644**	**760**	**23,398**	**71.4%**	**34,991**	**74.9%**
10/27/2003	68	80	11,673	83.7%	183	216	23,614	72.1%	35,287	75.6%
10/28/2003	68	80	11,753	84.3%	210	248	23,862	72.8%	35,615	76.3%
10/29/2003	70	83	11,835	84.9%	172	203	24,065	73.5%	35,900	76.9%
10/30/2003	84	99	11,935	85.6%	209	247	24,312	74.2%	36,246	77.6%
10/31/2003	61	72	12,007	86.1%	224	264	24,576	75.0%	36,582	78.3%
11/01/2003	**153**	**181**	**12,187**	**87.4%**	**425**	**502**	**25,077**	**76.6%**	**37,264**	**79.8%**
11/02/2003	**96**	**113**	**12,300**	**88.2%**	**243**	**287**	**25,364**	**77.4%**	**37,664**	**80.7%**
11/03/2003	46	54	12,355	88.6%	114	135	25,499	77.8%	37,853	81.1%
11/04/2003	51	60	12,415	89.1%	129	152	25,651	78.3%	38,066	81.5%
11/05/2003	45	53	12,468	89.4%	147	173	25,824	78.8%	38,292	82.0%
11/06/2003	58	68	12,536	89.9%	146	172	25,997	79.4%	38,533	82.5%
11/07/2003	58	68	12,605	90.4%	191	225	26,222	80.0%	38,827	83.1%

	Northern Zone				Southern Zone				All Zones	
Date	Reported Kill	Expanded Kill	Cumulative Kill	Cumulative Percent	Reported Kill	Expanded Kill	Cumulative Kill	Cumulative Percent	Cumulative Kill	Cumulative Percent
11/08/2003	**60**	**71**	**12,676**	**90.9%**	**277**	**327**	**26,549**	**81.0%**	**39,224**	**84.0%**
11/09/2003	**95**	**112**	**12,788**	**91.7%**	**280**	**330**	**26,879**	**82.1%**	**39,667**	**84.9%**
11/10/2003	31	37	12,824	92.0%	132	156	27,035	82.5%	39,859	85.4%
11/11/2003	46	54	12,879	92.4%	149	176	27,211	83.1%	40,089	85.8%
11/12/2003	68	80	12,959	93.0%	189	223	27,434	83.7%	40,393	86.5%
11/13/2003	30	35	12,994	93.2%	167	197	27,631	84.3%	40,625	87.0%
11/14/2003	37	44	13,038	93.5%	183	216	27,847	85.0%	40,885	87.5%
11/15/2003	**56**	**66**	**13,104**	**94.0%**	**324**	**382**	**28,229**	**86.2%**	**41,333**	**88.5%**
11/16/2003	**45**	**53**	**13,157**	**94.4%**	**219**	**258**	**28,488**	**87.0%**	**41,645**	**89.2%**
11/17/2003	34	40	13,197	94.7%	77	91	28,578	87.2%	41,776	89.5%
11/18/2003	19	22	13,220	94.8%	75	89	28,667	87.5%	41,886	89.7%
11/19/2003	19	22	13,242	95.0%	83	98	28,765	87.8%	42,007	90.0%
11/20/2003	32	38	13,280	95.3%	78	92	28,857	88.1%	42,137	90.2%
11/21/2003	21	25	13,305	95.4%	84	99	28,956	88.4%	42,261	90.5%
11/22/2003	**13**	**15**	**13,320**	**95.6%**	**61**	**72**	**29,028**	**88.6%**	**42,348**	**90.7%**
11/23/2003	**7**	**8**	**13,328**	**95.6%**	**61**	**72**	**29,100**	**88.8%**	**42,428**	**90.9%**
11/24/2003	16	19	13,347	95.8%	52	61	29,161	89.0%	42,508	91.0%
11/25/2003	19	22	13,369	95.9%	74	87	29,249	89.3%	42,618	91.3%
11/26/2003	12	14	13,384	96.0%	95	112	29,361	89.6%	42,744	91.5%
11/27/2003	21	25	13,408	96.2%	109	129	29,489	90.0%	42,898	91.9%
11/28/2003	30	35	13,444	96.4%	183	216	29,705	90.7%	43,149	92.4%
11/29/2003	**44**	**52**	**13,496**	**96.8%**	**207**	**244**	**29,950**	**91.4%**	**43,445**	**93.0%**
11/30/2003	**27**	**32**	**13,528**	**97.0%**	**111**	**131**	**30,081**	**91.8%**	**43,608**	**93.4%**
12/01/2003	27	32	13,559	97.3%	62	73	30,154	92.0%	43,713	93.6%
12/02/2003	19	22	13,582	97.4%	85	100	30,254	92.4%	43,836	93.9%
12/03/2003	17	20	13,602	97.6%	67	79	30,333	92.6%	43,935	94.1%
12/04/2003	15	18	13,620	97.7%	121	143	30,476	93.0%	44,095	94.4%
12/05/2003	15	18	13,637	97.8%	96	113	30,589	93.4%	44,226	94.7%
12/06/2003	**27**	**32**	**13,669**	**98.1%**	**225**	**266**	**30,855**	**94.2%**	**44,524**	**95.3%**
12/07/2003	**31**	**37**	**13,706**	**98.3%**	**209**	**247**	**31,101**	**94.9%**	**44,807**	**95.9%**
12/08/2003	17	20	13,726	98.5%	44	52	31,153	95.1%	44,879	96.1%
12/09/2003	18	21	13,747	98.6%	46	54	31,207	95.3%	44,954	96.3%
12/10/2003	9	11	13,758	98.7%	44	52	31,259	95.4%	45,017	96.4%
12/11/2003	4	5	13,762	98.7%	46	54	31,314	95.6%	45,076	96.5%
12/12/2003	5	6	13,768	98.8%	60	71	31,384	95.8%	45,153	96.7%
12/13/2003	**12**	**14**	**13,782**	**98.9%**	**141**	**166**	**31,551**	**96.3%**	**45,333**	**97.1%**
12/14/2003	**14**	**17**	**13,799**	**99.0%**	**197**	**232**	**31,783**	**97.0%**	**45,582**	**97.6%**
12/15/2003	11	13	13,812	99.1%	81	96	31,879	97.3%	45,691	97.8%
12/16/2003	15	18	13,830	99.2%	86	101	31,980	97.6%	45,810	98.1%
12/17/2003	19	22	13,852	99.4%	135	159	32,140	98.1%	45,992	98.5%
12/18/2003	24	28	13,880	99.6%	116	137	32,277	98.5%	46,157	98.8%
12/19/2003	26	31	13,911	99.8%	98	116	32,392	98.9%	46,303	99.2%
12/20/2003	**22**	**26**	**13,937**	**100.0%**	**171**	**202**	**32,594**	**99.5%**	**46,531**	**99.6%**
12/21/2003	**2**	**2**	**13,939**	**100.0%**	**140**	**165**	**32,759**	**100.0%**	**46,699**	**100.0%**
Total	**11,813**	**13,939**			**27,762**	**32,759**				

Table 13.1 2003 *Weekday of reported kill in percent. Data from mandatory reporting in the Exterior zone and questionnaires in the other zones.*

Zone/ Period	Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
Collins 1	23.6%	7.3%	14.6%	10.9%	10.9%	16.4%	16.4%
Collins 2	11.3%	14.9%	10.0%	12.0%	14.7%	13.0%	24.2%
Collins 3	10.5%	14.9%	14.9%	26.9%	3.0%	11.9%	17.9%
Collins Total	**12.4%**	**14.1%**	**11.1%**	**13.8%**	**12.8%**	**13.2%**	**22.6%**
Horicon 1	20.7%	7.3%	10.2%	9.0%	10.1%	11.7%	31.1%
Horicon 2	19.8%	9.7%	8.5%	10.1%	9.5%	14.1%	28.4%
Horicon 3	18.2%	9.9%	10.2%	9.1%	10.7%	12.8%	29.1%
Horicon 4	20.1%	10.0%	9.7%	13.0%	8.4%	12.5%	26.4%
Horicon Total	**19.5%**	**9.5%**	**9.4%**	**10.2%**	**9.7%**	**13.1%**	**28.6%**
Exterior	25.7%	9.5%	9.5%	9.5%	9.8%	10.7%	25.1%
Total	**24.6%**	**9.6%**	**9.5%**	**9.7%**	**9.9%**	**11.1%**	**25.6%**

Table 14.1 2003 *Percent success by active permit for the Horicon and Collins zone. Harvest figures were derived from questionnaire data.*

Zone/Period	1st Permit	2nd Permit	3rd Permit	4th Permit	5th Permit	6th Permit
Collins 1	50.0%	41.7%	31.3%	27.1%	18.8%	6.3%
Collins 2	79.6%	62.8%	48.0%	36.7%	30.1%	14.8%
Collins 3	68.2%	59.1%	36.4%	25.0%	13.6%	6.8%
Horicon 1	60.2%	46.6%	31.5%	22.2%	14.5%	9.3%
Horicon 2	64.0%	44.3%	29.0%	20.6%	12.6%	7.8%
Horicon 3	55.9%	38.4%	23.3%	15.4%	9.6%	6.0%
Horicon 4	57.5%	42.3%	30.8%	25.0%	15.4%	9.3%

Table 15.1 2003 *Number of birds harvested per permit holder and active permit holder by zone. Hunter numbers derived from applications, questionnaires and 1-800 registration.*

Zone	Birds/Permit Holder	Birds/Active Permit Holder
Collins	2.08	2.42
Horicon	1.29	1.68
Exterior	0.51	N/A

Table 16.1 2003 *Exterior Zone season bag derived from mandatory reporting data.*

Bag	Hunters	Percent
0	80,752	87.8%
1	3,632	3.9%
2	3,137	3.4%
3	1,198	1.3%
4	1,023	1.1%
5	498	0.5%
6	391	0.4%
7	282	0.3%
8	223	0.2%
9	159	0.2%
10	113	0.1%
11	102	0.1%
12	92	0.1%
13	53	0.1%
14	62	0.1%
15	36	0.0%
16	43	0.0%
17	28	0.0%
18	16	0.0%
19	23	0.0%
20	17	0.0%
21	13	0.0%
22	17	0.0%
23	11	0.0%
24	8	0.0%
25	10	0.0%
26	7	0.0%
27	11	0.0%
28	5	0.0%
29	4	0.0%
30	2	0.0%
31	4	0.0%
32	4	0.0%
33	2	0.0%
34	3	0.0%
35	1	0.0%
36	5	0.0%
37	1	0.0%
38	2	0.0%
40	1	0.0%
41	1	0.0%
42	1	0.0%
44	3	0.0%
46	1	0.0%
49	1	0.0%
52	1	0.0%
54	1	0.0%
55	1	0.0%
63	2	0.0%
73	1	0.0%
82	1	0.0%
84	1	0.0%
94	1	0.0%
96	1	0.0%
97	1	0.0%
103	1	0.0%
124	1	0.0%

Table 17.1 2003 *Percent of time spent hunting private land by zone.*

Zone	No Answer	< 25%	25-49%	50-75%	> 75%
Collins	21.7%	57.4%	1.2%	2.4%	17.3%
Horicon	25.9%	12.5%	1.5%	2.3%	57.7%

Table 18.1 2003 *Reported use of the Intensive Management Subzone (IMS) in the Horicon Zone by time period.*

Period	Percent of hunters using the IMS	Mean percent of time spent in the IMS
1	34.6%	89.0%
2	31.3%	89.1%
3	33.7%	88.5%
4	30.5%	87.9%
Overall	32.4%	88.7%

Table 19.1 2003 *Number of active hunters, percent paying blind access fee, mean days hunted, mean payment per trip, and total access fees paid by zone.*

Zone	Active Hunters	% Paying	Mean Days	Mean Payment	Total Paid
Collins	424	15.6%	5.3	$13.10	$4,592.38
Horicon	15,516	33.3%	4.1	$9.94	$210,568.91

Table 20.1 2003 *Number applicants, active hunters, and birds harvested during the September early Canada goose season.*

Year	# of Applicants	# of Active Hunters	Harvest
1990	19,561	6,408	842
1991	4,772	1,983	712
1992	5,383	2,024	772
1993	2,982	1,636	679
1994	20,724	7,114	1,668
1995	13,343	7,923	4,928
1996	21,378	8,979	10,506
1997	28,761		7,435
1998	29,580		7,627
1999	73,799		6,032
2000	69,716		11,192
2001	74,268		15,952
2002	75,565		11,687
2003	76,728		8,650

Table 21.1 2003 *Early September Canada goose harvest by date (bold numbers indicate weekends)*.

Date	Reported Harvest	Expanded Kill	Percent	Cumulative Harvest	Cumulative Percent
09/02/2003	1,898	2,164	25.0%	2,164	25.0%
09/03/2003	885	1,009	11.7%	3,173	36.7%
09/04/2003	564	643	7.4%	3,816	44.1%
09/05/2003	495	564	6.5%	4,380	50.6%
09/06/2003	**765**	**872**	**10.1%**	**5,252**	**60.7%**
09/07/2003	**607**	**692**	**8.0%**	**5,944**	**68.7%**
09/08/2003	200	228	2.6%	6,172	71.4%
09/09/2003	305	348	4.0%	6,520	75.4%
09/10/2003	207	236	2.7%	6,756	78.1%
09/11/2003	217	247	2.9%	7,003	81.0%
09/12/2003	258	294	3.4%	7,297	84.4%
09/13/2003	**458**	**522**	**6.0%**	**7,819**	**90.4%**
09/14/2003	**361**	**412**	**4.8%**	**8,231**	**95.2%**
09/15/2003	368	420	4.8%	8,650	100.0%
Total	**7,588**	**8,650**			

Table 22.1 2003 *Early September Canada goose harvest by county*.

County	Reported Kill	Expanded Kill	Percent
Adams	27	31	0.4%
Ashland	40	46	0.5%
Barron	244	278	3.2%
Bayfield	22	25	0.3%
Brown	494	563	6.5%
Buffalo	126	144	1.7%
Burnett	169	193	2.2%
Calument	32	36	0.4%
Chippewa	131	149	1.7%
Clark	54	62	0.7%
Columbia	39	44	0.5%
Crawford	104	119	1.4%
Dane	256	292	3.4%
Dodge	194	221	2.6%
Door	277	316	3.7%
Douglas	53	60	0.7%
Dunn	52	59	0.7%
Eau Claire	8	9	0.1%
Fond du Lac	94	107	1.2%
Forest	2	2	0.0%
Grant	21	24	0.3%
Green	41	47	0.5%
Iowa	14	16	0.2%
Iron	23	26	0.3%
Jackson	39	44	0.5%
Jefferson	320	365	4.2%
Juneau	59	67	0.8%
Kenosha	190	217	2.5%
Kewaunee	172	196	2.3%
La Crosse	76	87	1.0%
Lafayette	4	5	0.1%
Langlade	15	17	0.2%
Lincoln	17	19	0.2%
Manitowoc	453	516	6.0%
Marathon	165	188	2.2%
Marinette	81	92	1.1%
Milwaukee	1	1	0.0%
Monroe	43	49	0.6%
Oconto	85	97	1.1%
Oneida	48	55	0.6%
Outagamie	34	39	0.4%
Ozaukee	81	92	1.1%
Pepin	19	22	0.3%
Pierce	10	11	0.1%
Polk	396	451	5.2%
Portage	49	56	0.6%

County	Reported Kill	Expanded Kill	Percent
Price	91	104	1.2%
Racine	190	217	2.5%
Richland	31	35	0.4%
Rock	147	168	1.9%
Rusk	39	44	0.5%
St. Croix	189	215	2.5%
Sauk	5	6	0.1%
Sawyer	58	66	0.8%
Shawano	21	24	0.3%
Sheboygan	233	266	3.1%
Taylor	86	98	1.1%
Trempealeau	226	258	3.0%
Vernon	46	52	0.6%
Vilas	30	34	0.4%
Walworth	199	227	2.6%
Washburn	217	247	2.9%
Washington	235	268	3.1%
Waukesha	266	303	3.5%
Waupaca	76	87	1.0%
Waushara	22	25	0.3%
Winnebago	179	204	2.4%
Wood	128	146	1.7%
Total	**7,588**	**8,650**	

Table 23.1 2003 *Early September season bag derived from mandatory reporting data.*

Bag	Hunters	Percent
0	74,072	96.5%
1	920	1.2%
2	607	0.8%
3	449	0.6%
4	221	0.3%
5	191	0.2%
6	92	0.1%
7	45	0.1%
8	28	0.0%
9	34	0.0%
10	30	0.0%
11	9	0.0%
12	9	0.0%
13	4	0.0%
14	6	0.0%
15	1	0.0%
16	1	0.0%
18	4	0.0%
24	1	0.0%
25	2	0.0%
26	1	0.0%
28	1	0.0%

Table 24.1 2003 *Percent of successful bags containing 1 or 2 geese.*

Zone	Period	Percent of 1 Kill Bags	Percent of 2 Kill Bags
Collins	1	62.3%	37.7%
	2	72.0%	28.0%
	3	68.6%	31.4%
	All Periods	**70.5%**	**29.5%**
Horicon	1	52.5%	47.5%
	2	57.4%	42.6%
	3	60.0%	40.0%
	4	52.8%	47.3%
	All Periods	**56.6%**	**43.4%**

Table 1.2 2004 *Number of surveys mailed, returned, and response rate for the 2004 Canada goose season.*

Zone and Period	# Mailed	# Returned	Percent Response
Horicon 1	3,338	1,551	46.4%
Horicon 2	3,490	1,937	55.5%
Horicon 3	3,010	1,755	58.3%
Horicon 4	1,962	1,202	61.2%
Collins 1	102	69	67.6%
Collins 2	310	236	76.1%
Collins 3	45	36	80.0%
Total	**12,257**	**6,786**	**55.4%**

Table 2.2 2004 *Permits issued, active hunters, percent active, and number of successful hunters by zone and time period. Active and successful hunters derived from questionnaire data. Percent successful applies to active permit holders, except for Exterior Zone where it applies to all permit holders.*

Zone and Period	Permits Issued (hunters)	Active Hunters	% Active	# Successful	% Successful
Horicon 1	3,338	2,367	70.9%	1,093	46.2%
Horicon 2	7,874	5,937	75.4%	2,796	47.1%
Horicon 3	6,763	4,836	71.5%	2,128	44.0%
Horicon 4	1,962	1,240	63.2%	590	47.6%
Collins 1	102	69	68.1%	34	48.9%
Collins 2	310	263	84.8%	176	67.0%
Collins 3	45	36	80.6%	36	72.4%
Exterior	89,564			9,193	10.3%
Total	**109,958**			**16,046**	**14.6%**

Table 3.2 2004 *Number of goose permit applicants by zone and county of residence. (Continued on next page).*

	Horicon		Collins		Exterior	
County	Frequency	Percent	Frequency	Percent	Frequency	Percent
Adams	30	0.2%	1	0.2%	238	0.3%
Ashland	2	0.0%	1	0.2%	311	0.3%
Barron	6	0.0%			1,392	1.6%
Bayfield	4	0.0%			273	0.3%
Brown	104	0.5%	33	7.3%	3,056	3.4%
Buffalo	35	0.2%			468	0.5%
Burnett	2	0.0%			626	0.7%
Calumet	24	0.1%	41	9.0%	689	0.8%
Chippewa	28	0.1%			1,073	1.2%
Clark	12	0.1%	1	0.2%	452	0.5%
Columbia	814	4.1%	4	0.9%	1,421	1.6%
Crawford	90	0.5%			408	0.5%
Dane	1,125	5.6%	3	0.7%	5,210	5.8%
Dodge	1,788	8.9%			486	0.5%
Door	7	0.0%			801	0.9%
Douglas					676	0.8%
Dunn	36	0.2%			684	0.8%
Eau Claire	115	0.6%	2	0.4%	1,291	1.4%
Florence	4	0.0%			77	0.1%
Fond Du Lac	1,845	9.2%	1	0.2%	997	1.1%
Forest	11	0.1%			237	0.3%
Grant	280	1.4%	1	0.2%	575	0.6%
Green	111	0.6%	1	0.2%	692	0.8%
Green Lake	734	3.7%			247	0.3%
Iowa	89	0.4%			367	0.4%
Iron	7	0.0%			126	0.1%
Jackson	20	0.1%			319	0.4%
Jefferson	311	1.6%			2,309	2.6%
Juneau	54	0.3%			718	0.8%
Kenosha	152	0.8%			1,268	1.4%
Kewaunee			4	0.9%	728	0.8%
La Crosse	369	1.8%	2	0.4%	2,136	2.4%
Lafayette	50	0.3%			248	0.3%
Langlade	29	0.1%			356	0.4%
Lincoln	137	0.7%			733	0.8%
Manitowoc	33	0.2%	68	14.9%	2,076	2.3%
Marathon	264	1.3%	6	1.3%	1,813	2.0%
Marinette	32	0.2%	1	0.2%	1,052	1.2%
Marquette	154	0.8%			710	0.8%
Menominee		0.0%			8	0.0%
Milwaukee	1,701	8.5%	5	1.1%	3,153	3.5%
Monroe	55	0.3%	1	0.2%	718	0.8%
Oconto	18	0.1%	2	0.4%	926	1.0%
Oneida	125	0.6%	2	0.4%	1,023	1.1%

	Horicon		Collins		Exterior	
County	Frequency	Percent	Frequency	Percent	Frequency	Percent
Outagamie	442	2.2%	101	22.2%	3,714	4.1%
Ozaukee	268	1.3%	6	1.3%	1,414	1.6%
Pepin	13	0.1%			209	0.2%
Pierce	23	0.1%			908	1.0%
Polk	5	0.0%			1,557	1.7%
Portage	202	1.0%	2	0.4%	1,454	1.6%
Price	34	0.2%			375	0.4%
Racine	199	1.0%	12	2.6%	2,853	3.2%
Richland	37	0.2%			199	0.2%
Rock	428	2.1%			2,419	2.7%
Rusk	4	0.0%			313	0.3%
St. Croix	21	0.1%	1	0.2%	1,852	2.1%
Sauk	251	1.3%			1,191	1.3%
Sawyer	8	0.0%			426	0.5%
Shawano	56	0.3%	4	0.9%	877	1.0%
Sheboygan	212	1.1%	61	13.4%	2,524	2.8%
Taylor	8	0.0%			381	0.4%
Trempealeau	71	0.4%			743	0.8%
Vernon	139	0.7%			479	0.5%
Vilas	66	0.3%	1	0.2%	458	0.5%
Walworth	123	0.6%	1	0.2%	1,716	1.9%
Washburn	4	0.0%			694	0.8%
Washington	1,029	5.1%	1	0.2%	1,983	2.2%
Waukesha	1,747	8.7%	5	1.1%	5,345	6.0%
Waupaca	135	0.7%	11	2.4%	1,479	1.7%
Waushara	77	0.4%	1	0.2%	633	0.7%
Winnebago	1,018	5.1%	56	12.3%	3,107	3.5%
Wood	222	1.1%			2,070	2.3%
Unknown	843	4.2%			2,492	2.8%
Non. Resident	1,507	7.5%	12	2.6%	2,532	2.8%

Table 4.2 2004 *Goose hunting in past zones.*

Current Zone	Past Collins	Past Horicon	Past Exterior
Collins	86.6%	3.5%	10.0%
Horicon	0.2%	93.1%	6.7%

Table 5.2 *Percent hunting geese in 2004 that also hunted in 2003.*

Zone	% That Hunted in 2003
Collins	83.1%
Horicon	85.5%

Table 6.2 2004 *Past and present duck hunting by goose permit.*

Zone	Duck Hunted in 2003	Duck Hunted in 2004
Collins	57.6%	64.8%
Horicon	61.8%	69.8%

Table 7.2 2004 *Mean number of hunting trips by zone and time period. Applies to active permit holders only.*

Zone/Period	Mean # of Trips	Maximum # of Trips
Collins 1	4.7	13
Collins 2	4.2	20
Collins 3	5.9	26
Horicon 1	3.3	30
Horicon 2	3.7	35
Horicon 3	3.7	35
Horicon 4	3.6	45

Table 8.2 2004 *Harvest by zone and time period. The estimated harvest was derived from questionnaire data in the Collins and Horicon zones. Reported harvest in the Exterior Zone is from mandatory reporting. The reported harvest for the Exterior zone was adjusted by an overall compliance rate of 84.8% to obtain the estimated harvest.*

Zone/Period	Estimated Harvest	Reported Harvest
Collins 1	68	
Collins 2	355	
Collins 3	48	
Horicon 1	2,177	
Horicon 2	5,521	
Horicon 3	3,917	
Horicon 4	1,153	
Exterior	26,902	22,818
Total	**40,141**	

Table 9.2 2004 *Flyway allocation and estimated harvest by zone.*

Zone	Allocation	Harvest	% of Allocation
Collins	700	470	67.1%
Horicon	19,000	12,769	67.2%
Exterior	29,500	26,902	91.2%
Total	49,200	40,141	81.6%

Table 10.2 2004 *Exterior zone goose harvest by county (continued on next page).*

County	Reported Kill	Expanded Kill	Percent
Adams	262	309	1.1%
Ashland	40	47	0.2%
Barron	437	515	1.9%
Bayfield	65	77	0.3%
Brown	1,713	2,020	7.5%
Buffalo	201	237	0.9%
Burnett	228	269	1.0%
Calumet	272	321	1.2%
Chippewa	407	480	1.8%
Clark	116	137	0.5%
Columbia	218	257	1.0%
Crawford	105	124	0.5%
Dane	1,105	1,303	4.8%
Dodge	206	243	0.9%
Door	661	779	2.9%
Douglas	149	176	0.7%
Dunn	57	67	0.2%
Eau Claire	41	48	0.2%
Florence	18	21	0.1%
Fond du Lac	215	253	0.9%
Forest	35	41	0.2%
Grant	31	37	0.1%
Green	91	107	0.4%
Green Lake	1	1	0.0%
Iowa	50	59	0.2%
Iron	68	80	0.3%
Jackson	30	35	0.1%
Jefferson	597	704	2.6%
Juneau	171	202	0.7%
Kenosha	722	851	3.2%
Kewaunee	635	749	2.8%
La Crosse	278	328	1.2%
Lafayette	14	17	0.1%
Langlade	61	72	0.3%
Lincoln	111	131	0.5%
Manitowoc	1,434	1,691	6.3%
Marathon	308	363	1.3%
Marinette	359	423	1.6%
Marquette	369	435	1.6%
Menominee	3	4	0.0%
Milwaukee	7	8	0.0%
Monroe	146	172	0.6%
Oconto	414	488	1.8%
Oneida	63	74	0.3%
Outagamie	898	1,059	3.9%

County	Reported Kill	Expanded Kill	Percent
Ozaukee	621	732	2.7%
Pepin	19	22	0.1%
Pierce	88	104	0.4%
Polk	517	610	2.3%
Portage	193	228	0.8%
Price	54	64	0.2%
Racine	930	1,096	4.1%
Richland	19	22	0.1%
Rock	474	559	2.1%
Rusk	101	119	0.4%
Saint Croix	422	498	1.8%
Sauk	177	209	0.8%
Sawyer	102	120	0.4%
Shawano	192	226	0.8%
Sheboygan	1,034	1,219	4.5%
Taylor	107	126	0.5%
Trempealeau	104	123	0.5%
Vernon	87	103	0.4%
Vilas	51	60	0.2%
Walworth	804	948	3.5%
Washburn	190	224	0.8%
Washington	704	830	3.1%
Waukesha	939	1,107	4.1%
Waupaca	403	475	1.8%
Waushara	159	187	0.7%
Winnebago	611	720	2.7%
Wood	304	358	1.3%
Total	**22,818**	**26,902**	

Table 11.2 2004 *Horicon Zone goose harvest by county. The estimated harvest was derived from questionnaire data.*

County	Total Estimated Harvest	% of Harvest
Columbia	383	3.0%
Dodge	7,164	56.1%
Fond du lac	2,694	21.1%
Green Lake	1,571	12.3%
Marquette	319	2.5%
Washington	421	3.3%
Winnebago	217	1.7%
Total	**12,769**	

Table 12.2 2004 *Exterior zone goose harvest by date. Bold numbers indicate weekends (continued on the next two pages).*

	Northern Zone				Southern Zone				All Zones	
Date	Reported Kill	Expanded Kill	Cumulative Kill	Cumulative Percent	Reported Kill	Expanded Kill	Cumulative Kill	Cumulative Percent	Cumulative Kill	Cumulative Percent
09/18/2004	**135**	**159**	**159**	**2.2%**	**323**	**381**	**381**	**1.9%**	**540**	**2.0%**
09/19/2004	**148**	**174**	**334**	**4.6%**	**284**	**335**	**716**	**3.6%**	**1,049**	**3.9%**
09/20/2004	44	52	386	5.3%	83	98	814	4.1%	1,199	4.5%
09/21/2004	62	73	459	6.3%	71	84	897	4.6%	1,356	5.0%
09/22/2004	67	79	538	7.4%	89	105	1,002	5.1%	1,540	5.7%
09/23/2004	70	83	620	8.5%	107	126	1,128	5.7%	1,748	6.5%
09/24/2004	86	101	722	9.9%	132	156	1,284	6.5%	2,005	7.5%
09/25/2004	**244**	**288**	**1,009**	**13.9%**	**411**	**485**	**1,769**	**9.0%**	**2,778**	**10.3%**
09/26/2004	**346**	**408**	**1,417**	**19.5%**	**409**	**482**	**2,251**	**11.5%**	**3,668**	**13.6%**
09/27/2004	135	159	1,576	21.7%	150	177	2,428	12.4%	4,004	14.9%
09/28/2004	140	165	1,741	24.0%	209	246	2,674	13.6%	4,415	16.4%
09/29/2004	102	120	1,862	25.6%	233	275	2,949	15.0%	4,810	17.9%
09/30/2004	86	101	1,963	27.0%	188	222	3,170	16.2%	5,133	19.1%
10/01/2004	104	123	2,086	28.7%	176	208	3,378	17.2%	5,463	20.3%
10/02/2004	**250**	**295**	**2,380**	**32.7%**	**518**	**611**	**3,989**	**20.3%**	**6,369**	**23.7%**
10/03/2004	**258**	**304**	**2,685**	**36.9%**	**916**	**1,080**	**5,069**	**25.8%**	**7,753**	**28.8%**
10/04/2004	144	170	2,854	39.3%	394	465	5,533	28.2%	8,387	31.2%
10/05/2004	155	183	3,037	41.8%	348	410	5,943	30.3%	8,980	33.4%
10/06/2004	119	140	3,177	43.7%	324	382	6,325	32.2%	9,503	35.3%
10/07/2004	112	132	3,309	45.5%	301	355	6,680	34.0%	9,990	37.1%
10/08/2004	99	117	3,426	47.1%	217	256	6,936	35.3%	10,362	38.5%
10/09/2004	**212**	**250**	**3,676**	**50.6%**	**606**	**714**	**7,651**	**39.0%**	**11,327**	**42.1%**
10/10/2004	**254**	**299**	**3,976**	**54.7%**	**616**	**726**	**8,377**	**42.7%**	**12,352**	**45.9%**
10/11/2004	55	65	4,040	55.6%	160	189	8,565	43.6%	12,606	46.9%
10/12/2004	70	83	4,123	56.7%	128	151	8,716	44.4%	12,839	47.7%
10/13/2004	104	123	4,246	58.4%	159	187	8,904	45.4%	13,149	48.9%
10/14/2004	91	107	4,353	59.9%	166	196	9,100	46.4%	13,452	50.0%
10/15/2004	104	123	4,475	61.6%	198	233	9,333	47.5%	13,808	51.3%
10/16/2004	**127**	**150**	**4,625**	**63.6%**	**475**	**560**	**9,893**	**50.4%**	**14,518**	**54.0%**
10/17/2004	**137**	**162**	**4,787**	**65.9%**	**448**	**528**	**10,421**	**53.1%**	**15,208**	**56.5%**
10/18/2004	68	80	4,867	67.0%	186	219	10,640	54.2%	15,507	57.7%
10/19/2004	68	80	4,947	68.1%	154	182	10,822	55.1%	15,769	58.6%
10/20/2004	77	91	5,038	69.3%	204	241	11,063	56.4%	16,100	59.9%
10/21/2004	72	85	5,123	70.5%	162	191	11,254	57.3%	16,376	60.9%
10/22/2004	93	110	5,232	72.0%	225	265	11,519	58.7%	16,751	62.3%
10/23/2004	**89**	**105**	**5,337**	**73.4%**	**309**	**364**	**11,883**	**60.5%**	**17,220**	**64.0%**
10/24/2004	**104**	**123**	**5,460**	**75.1%**	**379**	**447**	**12,330**	**62.8%**	**17,790**	**66.1%**
10/25/2004	42	50	5,509	75.8%	96	113	12,443	63.4%	17,953	66.7%
10/26/2004	42	50	5,559	76.5%	122	144	12,587	64.1%	18,146	67.5%
10/27/2004	45	53	5,612	77.2%	129	152	12,739	64.9%	18,351	68.2%
10/28/2004	37	44	5,656	77.8%	103	121	12,861	65.5%	18,516	68.8%
10/29/2004	39	46	5,702	78.4%	102	120	12,981	66.1%	18,682	69.5%
10/30/2004	**63**	**74**	**5,776**	**79.5%**	**156**	**184**	**13,165**	**67.1%**	**18,941**	**70.4%**
10/31/2004	**60**	**71**	**5,847**	**80.4%**	**180**	**212**	**13,377**	**68.1%**	**19,224**	**71.5%**
11/01/2004	52	61	5,908	81.3%	132	156	13,533	68.9%	19,441	72.3%
11/02/2004	63	74	5,982	82.3%	144	170	13,702	69.8%	19,685	73.2%

	Northern Zone				Southern Zone				All Zones	
Date	Reported Kill	Expanded Kill	Cumulative Kill	Cumulative Percent	Reported Kill	Expanded Kill	Cumulative Kill	Cumulative Percent	Cumulative Kill	Cumulative Percent
11/03/2004	41	48	6,031	83.0%	116	137	13,839	70.5%	19,870	73.9%
11/04/2004	44	52	6,082	83.7%	147	173	14,012	71.4%	20,095	74.7%
11/05/2004	35	41	6,124	84.2%	123	145	14,157	72.1%	20,281	75.4%
11/06/2004	**77**	**91**	**6,215**	**85.5%**	**284**	**335**	**14,492**	**73.8%**	**20,707**	**77.0%**
11/07/2004	**53**	**62**	**6,277**	**86.4%**	**277**	**327**	**14,819**	**75.5%**	**21,096**	**78.4%**
11/08/2004	23	27	6,304	86.7%	134	158	14,977	76.3%	21,281	79.1%
11/09/2004	34	40	6,344	87.3%	104	123	15,099	76.9%	21,444	79.7%
11/10/2004	36	42	6,387	87.9%	101	119	15,219	77.5%	21,605	80.3%
11/11/2004	38	45	6,431	88.5%	111	131	15,349	78.2%	21,781	81.0%
11/12/2004	25	29	6,461	88.9%	103	121	15,471	78.8%	21,932	81.5%
11/13/2004	**49**	**58**	**6,519**	**89.7%**	**220**	**259**	**15,730**	**80.1%**	**22,249**	**82.7%**
11/14/2004	**46**	**54**	**6,573**	**90.4%**	**193**	**228**	**15,958**	**81.3%**	**22,531**	**83.8%**
11/15/2004	15	18	6,591	90.7%	66	78	16,036	81.7%	22,626	84.1%
11/16/2004	38	45	6,635	91.3%	67	79	16,115	82.1%	22,750	84.6%
11/17/2004	26	31	6,666	91.7%	65	77	16,191	82.5%	22,857	85.0%
11/18/2004	22	26	6,692	92.1%	62	73	16,264	82.9%	22,956	85.3%
11/19/2004	23	27	6,719	92.4%	76	90	16,354	83.3%	23,073	85.8%
11/20/2004	**11**	**13**	**6,732**	**92.6%**	**77**	**91**	**16,445**	**83.8%**	**23,177**	**86.2%**
11/21/2004	**7**	**8**	**6,740**	**92.7%**	**62**	**73**	**16,518**	**84.1%**	**23,258**	**86.5%**
11/22/2004	16	19	6,759	93.0%	55	65	16,583	84.5%	23,342	86.8%
11/23/2004	18	21	6,780	93.3%	37	44	16,626	84.7%	23,407	87.0%
11/24/2004	14	17	6,797	93.5%	84	99	16,725	85.2%	23,522	87.4%
11/25/2004	3	4	6,800	93.6%	65	77	16,802	85.6%	23,602	87.7%
11/26/2004	8	9	6,810	93.7%	105	124	16,926	86.2%	23,736	88.2%
11/27/2004	**13**	**15**	**6,825**	**93.9%**	**117**	**138**	**17,064**	**86.9%**	**23,889**	**88.8%**
11/28/2004	**7**	**8**	**6,833**	**94.0%**	**89**	**105**	**17,169**	**87.5%**	**24,002**	**89.2%**
11/29/2004	11	13	6,846	94.2%	36	42	17,211	87.7%	24,057	89.4%
11/30/2004	8	9	6,856	94.3%	70	83	17,294	88.1%	24,149	89.8%
12/01/2004	14	17	6,872	94.5%	53	62	17,356	88.4%	24,228	90.1%
12/02/2004	22	26	6,898	94.9%	92	108	17,465	89.0%	24,363	90.6%
12/03/2004	8	9	6,908	95.0%	102	120	17,585	89.6%	24,493	91.1%
12/04/2004	**41**	**48**	**6,956**	**95.7%**	**182**	**215**	**17,799**	**90.7%**	**24,755**	**92.0%**
12/05/2004	**28**	**33**	**6,989**	**96.1%**	**194**	**229**	**18,028**	**91.8%**	**25,017**	**93.0%**
12/06/2004	14	17	7,006	96.4%	47	55	18,084	92.1%	25,089	93.3%
12/07/2004	8	9	7,015	96.5%	64	75	18,159	92.5%	25,174	93.6%
12/08/2004	15	18	7,033	96.7%	67	79	18,238	92.9%	25,271	93.9%
12/09/2004	9	11	7,043	96.9%	63	74	18,312	93.3%	25,356	94.3%
12/10/2004	6	7	7,050	97.0%	71	84	18,396	93.7%	25,446	94.6%
12/11/2004	**45**	**53**	**7,103**	**97.7%**	**181**	**213**	**18,609**	**94.8%**	**25,713**	**95.6%**
12/12/2004	**40**	**47**	**7,151**	**98.4%**	**138**	**163**	**18,772**	**95.6%**	**25,923**	**96.4%**
12/13/2004	5	6	7,157	98.5%	33	39	18,811	95.8%	25,967	96.5%
12/14/2004	12	14	7,171	98.6%	51	60	18,871	96.1%	26,042	96.8%
12/15/2004	20	24	7,194	99.0%	58	68	18,939	96.5%	26,134	97.2%
12/16/2004	8	9	7,204	99.1%	78	92	19,031	97.0%	26,235	97.5%
12/17/2004	10	12	7,215	99.3%	70	83	19,114	97.4%	26,329	97.9%
12/18/2004	**21**	**25**	**7,240**	**99.6%**	**185**	**218**	**19,332**	**98.5%**	**26,572**	**98.8%**
12/19/2004	**2**	**2**	**7,243**	**99.6%**	**76**	**90**	**19,422**	**98.9%**	**26,664**	**99.1%**
12/20/2004	6	7	7,250	99.7%	74	87	19,509	99.4%	26,759	99.5%
12/21/2004	16	19	7,269	100.0%	106	125	19,634	100.0%	26,902	100.0%

	Northern Zone				Southern Zone				All Zones	
Date	Reported Kill	Expanded Kill	Cumulative Kill	Cumulative Percent	Reported Kill	Expanded Kill	Cumulative Kill	Cumulative Percent	Cumulative Kill	Cumulative Percent
Total	**6,165**				**16,653**				**26,902**	

Table 13.2 2004 *Weekday of reported kill in percent. Data from mandatory reporting in the Exterior zone and questionnaires in the other zones.*

Zone/ Period	Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
Collins 1	21.6%	0.0%	8.1%	8.1%	13.5%	13.5%	35.1%
Collins 2	17.7%	10.9%	15.4%	13.6%	9.1%	13.1%	20.4%
Collins 3	11.8%	17.7%	5.9%	2.9%	8.8%	14.7%	38.2%
Collins Total	**17.5%**	**10.3%**	**13.4%**	**11.6%**	**9.6%**	**13.4%**	**24.3%**
Horicon 1	22.4%	7.8%	9.5%	5.5%	9.2%	15.0%	30.6%
Horicon 2	18.9%	7.7%	9.8%	9.4%	10.9%	18.1%	25.3%
Horicon 3	19.0%	7.6%	9.1%	11.2%	11.7%	12.3%	29.2%
Horicon 4	22.4%	9.9%	9.1%	11.6%	8.8%	11.6%	26.7%
Horicon Total	**20.4%**	**8.1%**	**9.4%**	**9.2%**	**10.3%**	**14.7%**	**27.8%**
Exterior	25.8%	9.9%	10.2%	10.4%	9.7%	10.2%	23.8%
All Zones	**25.0%**	**9.7%**	**10.2%**	**10.2%**	**9.8%**	**10.8%**	**24.3%**

Table 14.2 2004 *Percent success by active permit for the Horicon and Collins zone. Harvest figures were derived from questionnaire data.*

Zone/Period	1st Permit	2nd Permit	3rd Permit
Collins 1	48.9%	31.9%	17.0%
Collins 2	67.0%	44.5%	22.5%
Collins 3	72.4%	48.3%	10.3%
Horicon 1	46.2%	29.9%	15.8%
Horicon 2	47.1%	29.2%	16.2%
Horicon 3	44.0%	25.6%	11.4%
Horicon 4	47.6%	30.3%	15.2%

Table 15.2 2004 *Number of birds harvested per permit holder and active permit holder by zone. Hunter numbers derived from applications, questionnaires and 1-800 registration.*

Zone	Birds/Permit Holder	Birds/Active Permit Holder
Collins	1.03	1.28
Horicon	0.64	0.89
Exterior	0.30	N/A

Table 16.2 2004 *Exterior Zone season bag derived from mandatory reporting data.*

Bag	Hunters	Percent
0	80,371	89.7%
1	5,069	5.7%
2	1,912	2.1%
3	864	1.0%
4	428	0.5%
5	260	0.3%
6	177	0.2%
7	140	0.2%
8	91	0.1%
9	55	0.1%
10	55	0.1%
11	35	0.0%
12	19	0.0%
13	16	0.0%
14	8	0.0%
15	5	0.0%
16	4	0.0%
17	8	0.0%
18	7	0.0%
19	8	0.0%
20	8	0.0%
21	4	0.0%
23	2	0.0%
24	4	0.0%
25	2	0.0%
27	3	0.0%
28	1	0.0%
30	1	0.0%
31	1	0.0%
33	2	0.0%
34	1	0.0%
36	1	0.0%
40	1	0.0%
47	1	0.0%

Table 17.2 2004 *Percent of time spent hunting private land by zone.*

Zone	No Answer	< 25%	25-49%	50-75%	> 75%
Collins	26.4%	56.0%	0.3%	1.5%	15.8%
Horicon	30.2%	13.1%	1.2%	1.9%	53.6%

Table 18.2 2004 *Reported use of the Intensive Management Subzone (IMS) in the Horicon Zone by time period.*

Period	Percent of hunters using the IMS	Mean percent of time spent in the IMS
1	34.4%	84.0%
2	33.1%	90.1%
3	36.1%	87.9%
4	29.2%	87.3%
Overall	33.6%	87.4%

Table 19.2 2004 *Number of active hunters, percent paying blind access fee, mean days hunted, mean payment per trip, and total access fees paid by zone.*

Zone	Active Hunters	Percent Paying	Mean Days	Mean Payment	Total Paid
Collins	368	13.2%	4.5	$11.21	$2,450.42
Horicon	14,379	32.8%	3.6	$10.84	$184,049.36

Table 20.2 2004 *Number applicants, active hunters, and birds harvested during the September early Canada goose season.*

Year	# of Applicants	# of Active Hunters	Harvest
1990	19,561	6,408	842
1991	4,772	1,983	712
1992	5,383	2,024	772
1993	2,982	1,636	679
1994	20,724	7,114	1,668
1995	13,343	7,923	4,928
1996	21,378	8,979	10,506
1997	28,761		7,435
1998	29,580		7,627
1999	73,799		6,032
2000	69,716		11,192
2001	74,268		15,952
2002	75,565		11,687
2003	76,728		8,650
2004	76,294		14,007

Table 21.2 2004 *Early September Canada goose harvest by date (bold numbers indicate weekends)*.

Date	Reported Kill	Expanded Kill	Percent	Cumulative Kill	Cumulative Percent
09/01/2004	2,661	3,145	22.5%	3,145	22.5%
09/02/2004	976	1,154	8.2%	4,299	30.7%
09/03/2004	896	1,059	7.6%	5,358	38.3%
09/07/2004	913	1,079	7.7%	6,437	46.0%
09/08/2004	774	915	6.5%	7,352	52.5%
09/09/2004	796	941	6.7%	8,293	59.2%
09/10/2004	651	769	5.5%	9,062	64.7%
09/11/2004	**1,237**	**1,462**	**10.4%**	**10,525**	**75.1%**
09/12/2004	**1,443**	**1,706**	**12.2%**	**12,230**	**87.3%**
09/13/2004	496	586	4.2%	12,816	91.5%
09/14/2004	473	559	4.0%	13,376	95.5%
09/15/2004	534	631	4.5%	14,007	100.0%
Total	**11,850**	**14,007**			

Table 22.2 2004 *Early September Canada goose harvest by county*.

County	Reported Kill	Expanded Kill	Percent
Adams	35	41	0.3%
Ashland	33	39	0.3%
Barron	505	597	4.3%
Bayfield	17	20	0.1%
Brown	884	1,045	7.5%
Buffalo	237	280	2.0%
Burnett	322	381	2.7%
Calumet	160	189	1.4%
Chippewa	239	282	2.0%
Clark	108	128	0.9%
Columbia	72	85	0.6%
Crawford	88	104	0.7%
Dane	221	261	1.9%
Dodge	282	333	2.4%
Door	417	493	3.5%
Douglas	83	98	0.7%
Dunn	33	39	0.3%
Eau Claire	26	31	0.2%
Florence	17	20	0.1%
Fond du Lac	125	148	1.1%
Forest	24	28	0.2%
Grant	24	28	0.2%
Green	49	58	0.4%
Green Lake	3	4	0.0%
Iowa	20	24	0.2%
Iron	35	41	0.3%
Jackson	21	25	0.2%
Jefferson	277	327	2.3%
Juneau	80	95	0.7%
Kenosha	172	203	1.5%
Kewaunee	296	350	2.5%
La Crosse	103	122	0.9%
Lafayette	3	4	0.0%
Langlade	24	28	0.2%
Lincoln	42	50	0.4%
Manitowoc	705	833	5.9%
Marathon	257	304	2.2%
Marinette	109	129	0.9%
Marquette	3	4	0.0%
Milwaukee	3	4	0.0%
Monroe	101	119	0.9%
Oconto	172	203	1.5%
Oneida	88	104	0.7%
Outagamie	215	254	1.8%
Ozaukee	140	165	1.2%
Pepin	6	7	0.1%

County	Reported Kill	Expanded Kill	Percent
Pierce	51	60	0.4%
Polk	807	954	6.8%
Portage	158	187	1.3%
Price	135	160	1.1%
Racine	245	290	2.1%
Richland	23	27	0.2%
Rock	165	195	1.4%
Rusk	50	59	0.4%
Saint Croix	287	339	2.4%
Sauk	44	52	0.4%
Sawyer	103	122	0.9%
Shawano	70	83	0.6%
Sheboygan	511	604	4.3%
Taylor	154	182	1.3%
Trempealeau	303	358	2.6%
Vernon	33	39	0.3%
Vilas	45	53	0.4%
Walworth	253	299	2.1%
Washburn	266	314	2.2%
Washington	273	323	2.3%
Waukesha	294	348	2.5%
Waupaca	166	196	1.4%
Waushara	38	45	0.3%
Winnebago	322	381	2.7%
Wood	178	210	1.5%
Total	**11,850**	**14,007**	

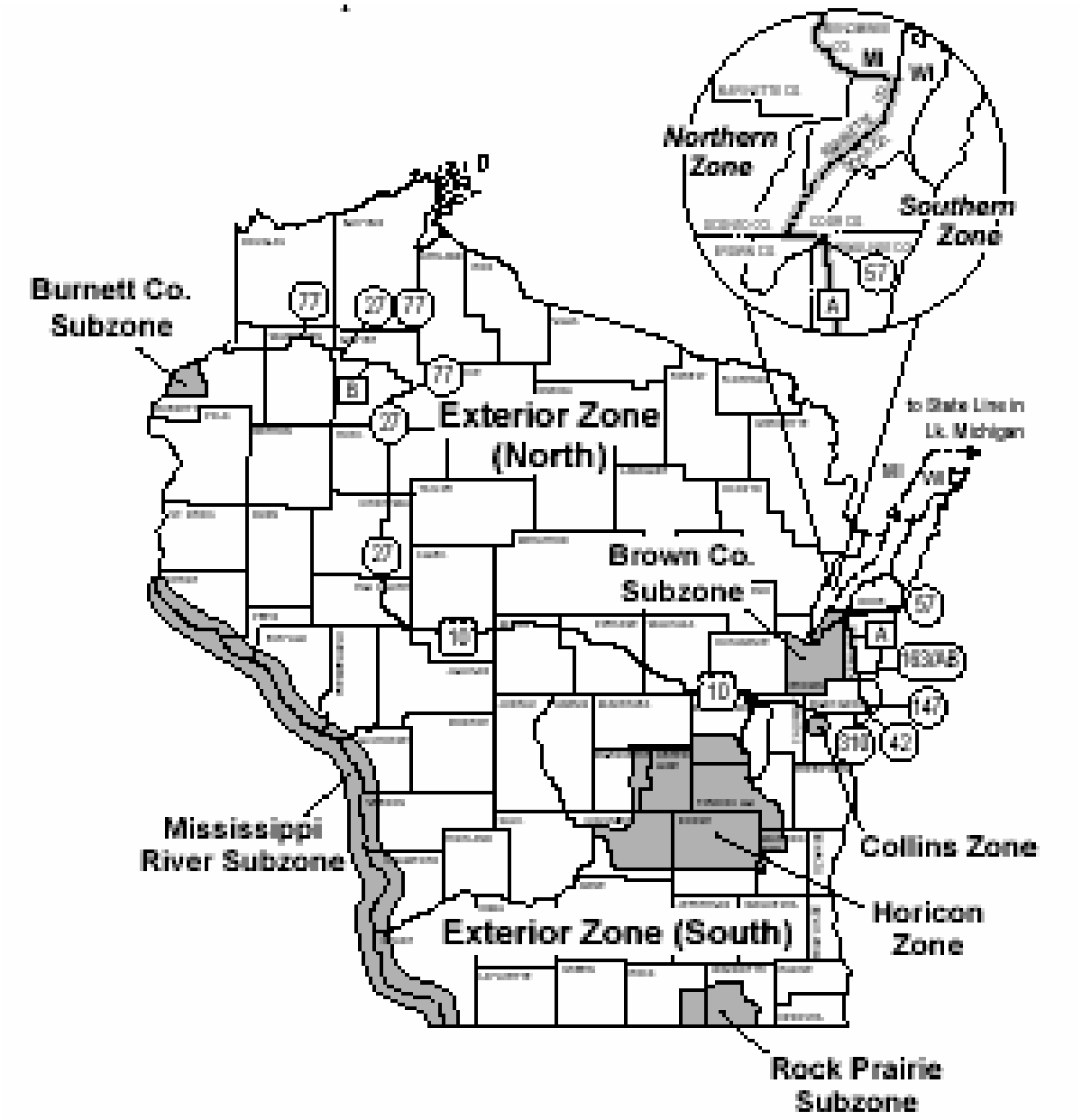
Table 23.2 2004 *Early September season bag derived from mandatory reporting data.*

Bag	Hunters	Percent
0	72,927	95.6%
1	2,233	2.9%
2	696	0.9%
3	255	0.3%
4	106	0.1%
5	48	0.1%
6	14	0.0%
7	8	0.0%
8	3	0.0%
9	2	0.0%
10	1	0.0%
12	1	0.0%

Table 24.2. 2004 *Percent of successful bags containing 1 or 2 geese.*

Zone	Period	Percent of 1 Kill Bags	Percent of 2 Kill Bags
Collins	1	87.8%	12.2%
	2	83.6%	16.4%
	3	88.2%	11.8%
	All Periods	**84.7%**	**15.3%**
Horicon	1	70.8%	29.2%
	2	75.6%	24.4%
	3	75.5%	24.5%
	4	68.1%	31.9%
	All Periods	**73.2%**	**26.9%**

Figure 1. Canada goose management zones and subzones



WISCONSIN
DEPT. OF NATURAL RESOURCES

Appendix 1. Establishing harvest quotas for the regular Canada goose season

A number of our Canada goose hunters suggested that we include a section on how Canada goose harvest quotas are established. We agree that it would be of value to include a brief explanation of that process in this report.

We have two distinct Canada goose hunting seasons in Wisconsin. The Early September season which currently occurs statewide September 1 –15, and the regular season. Since the Early September season occurs before migrant goose populations from Canada arrive in the state, the harvest during this season does not count against our regular season quota. Currently, the quota applies only to seasons that occur on or after September 16, annually.

Our regular Canada goose season (that which begins on or after September 16 each year) is determined by the status of the Mississippi Valley Population (MVP) of Canada geese which nest on the Hudson Bay and James Bay lowlands, primarily in Ontario. As of 2005, band recoveries indicate that MVP geese make up about 48% of our regular season harvest. Annually, the U.S. Fish and Wildlife Service (FWS) establishes a maximum allowable harvest for this population, based on a recommendation from the Mississippi Flyway Council (MFC). The level of harvest is based on an estimate of the spring population (breeders and non-breeders) on the breeding grounds in northern Ontario and subsequent gosling production. The annual allowable harvest objective is set with the goal of having a spring breeding population of 375,000 for MVP Canada geese.

Once an allowable harvest level is set on the population, that harvest is allocated to major and other harvest states and provinces. Annually, about 80,500 MVP geese are allocated to the "other" harvest states and provinces. The balance of the allowable harvest is then allocated to the four major MVP harvest states as follows: Wisconsin-35%; Illinois-33%; Michigan-20%; Kentucky-12%. Our MVP maximum allowable harvest in both 2003 and 2004 was about 30,000.

During the regular season, we know that not all Canada geese harvested in Wisconsin are migrant MVP Canada geese. From band recoveries reported by hunters, we currently estimate that during the regular season, about 48% of the Canada geese harvested in Wisconsin are MVP geese, 49% are giants and about 3% belong to other migrant Canada goose populations. We account for this in our overall regular season Canada goose maximum allowable harvest. In 2005, our total maximum allowable Canada goose harvest was 69,500 (30,000 divided by 0.48).

We then allocate our total maximum allowable harvest to the 3 zones, taking in to consideration, number of hunters in each zone, bag limits, and season lengths. We also need to ensure that the Horicon Zone's quota is sufficient to address farmer concerns for agricultural crop damage.

We hope this explanation helps you understand how our quotas work.